ELECTRICAL LEGEND

	120V DUPLEX RECEPTACLE: 18" AFF STANDARD, UNO
GFI	120V DUPLEX RECEPTACLE: GFI 18" AFF STANDARD, UNO
GFI WP	120V DUPLEX RECEPTACLE: WEATHERPROOF GFI W/ WEATHERPROOF IN-USE COVER
	120V QUADRUPLEX RECEPTACLE: 18" AFF STANDARD, UNO
GFI	120V QUADRUPLEX RECEPTACLE: GFI 18" AFF STANDARD, UNO
J	JUNCTION BOX, PURPOSE AS NOTED
J	JUNCTION BOX IN WALL, PURPOSE AS NOTED: 18" AFF STANDARD UNO
	DISCONNECT SWITCH NON-FUSED
	DISCONNECT SWITCH FUSED
	DATA/TELCO OUTLET: 18" AFF STANDARD UNO
	DATA OUTLET: 18" AFF STANDARD UNO
	TELCO OUTLET: 18" AFF STANDARD UNO W: TELEPHONE OUTLET, 48" AFF UNO
S	SINGLE POLE WALL SWITCH: 44" AFF STANDARD UNO
S_M	MOTOR RATED SWITCH: 44" AFF STANDARD UNO
S_{VS}	VACANCY SENSOR DUAL TECHNOLOGY WALL SWITCH: 44" AFF STANDARD UNO
S_T	DIGITAL TIMER SWITCH: 44" AFF STANDARD UNO
CR	CARD READER - 48" AFF
CR K	CARD READER WITH KEYPAD - 48" AFF
EL	ELECTRONIC LOCKING MECHANISM
DC	DOOR CONTACT
REX	REQUEST FOR EXIT SENSOR
DH	DOOR HOLD OPEN
F	FIXED DOME CAMERA
PTZ	PAN/TILT/ZOOM DOME CAMERA
	PUSH BUTTON - 48" AFF
PP	PUSH PLATE - 48" AFF
ADO	AUTOMATIC DOOR OPERATOR
H	HEAT DETECTOR

ABBREVIATIONS

1PH	SINGLE-PHASE
1P	SINGLE POLE
2/C	TWO-CONDUCTOR
3/C	THREE-CONDUCTOR
3PH	THREE-PHASE
4/C	FOUR-CONDUCTOR
4W	FOUR-WIRE
A/C UNIT	AIR CONDITIONING UNIT
A/E	ARCHITECT/ENGINEER
AAP	ALARM ANNUNCIATOR PANEL
AC	ALTERNATING CURRENT OR ARMORED CABLE
ACC	ACCESSIBLE
ADDL	ADDITIONAL
ADJ	ADJACENT, ADJOINING
ADO	AUTOMATIC DOOR OPENER
AF	AMPERE FRAME OR AMP FUSE
AFC	ABOVE FINISHED COUNTER, AUTOMATIC FREQUENCY CONTROL, OR AVAILABLE FAULT CURRENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AH	AMPERE HOUR
AHJ	AUTHORITY HAVING JURISDICTION
AIC	AMPERE INTERRUPTING CAPACITY
ALT	ALTERNATE
AMB	AMBIENT
AMP	AMPERE
ARCH	ARCHITECT
ASC	AMPS SHORT CIRCUIT
AT	AMPERE TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AV	AUDIO VISUAL
BAT	BATTERY
BC	BARE COPPER
BD	BOARD
BFF	BELOW FINISH FLOOR
BIL	BASIC INSULATION LEVEL
BLDG	BUILDING
BRKR	BREAKER
BYP	BYPASS
C	CONDUIT
CAB	CABINET
CALC	CALCULATION, CALCULATED
CAP	CAPACITY
CAT	CATALOG
CATV	COMMUNITY ANTENNA TELEVISION
CCR	CONTROL CONTACTOR
CCTV	CLOSED CIRCUIT TELEVISION
cd	CANDELA
CD	CONSTRUCTION DOCUMENTS
CF	CONTRACTOR FURNISHED
CFE	CONTRACTOR FURNISHED EQUIPMENT
CHW	CHILLED WATER
CHWP	CHILLED WATER PUMP
CKT	CIRCUIT
CKT BRKR	CIRCUIT BREAKER
CLF	CURRENT LIMITING FUSE
CLG	CEILING
CMU	CONCRETE MASONRY UNIT
COAX	COAX CABLE
COMM	COMMUNICATION
COMPT	COMPARTMENT
CONC	CONCRETE
CONT	CONTINUE
CONTR	CONTRACTOR
COORD	COORDINATE
CPT	CONTROL POWER TRANSFORMER
CRI	COLOR RENDERING INDEX
CT	CURRENT TRANSFORMER
CTV	CABLE TELEVISION
CU	COPPER
CU FT	CUBIC FEET
CUR	CURRENT
DB	DECIBEL OR DIRECT BURIAL
DC	DIRECT CURRENT
DCP	DIMMER CONTROL PANEL
DEG C	DEGREES CELSIUS
DEG F	DEGREES FAHRENHEIT
DEMO	DEMOLITION
DIAG	DIAGRAM
DISC	DISCONNECT
DISTR	DISTRIBUTION
DISTR PL	DISTRIBUTION PANEL
DMR SW	DIMMER SWITCH
DN	DOWN
DPDT	DOUBLE POLE, DOUBLE THROW
DPST	DOUBLE POLE, SINGLE THROW
DRSW	DOOR SWITCH
DS	DISCONNECT SWITCH
DWG	DRAWING
EC	EMPTY CONDUIT
EG	EQUIPMENT GROUND
EL	ELEVATION
ELEC	ELECTRIC OR ELECTRICAL
ELEV	ELEVATOR
EMCP	EMERGENCY MONITORING CONTROL PANEL
EMER	EMERGENCY
EMI	ELECTROMAGNETIC INTERFERENCE
EMT	ELECTRICAL METALLIC TUBING
ENCL	ENCLOSURE
EPO	EMERGENCY POWER OFF
ESMT	EASEMENT
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EXIST	EXISTING
FA	FIRE ALARM
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FABL	FIRE ALARM BELL
FABX	FIRE ALARM BOX
FACP	FIRE ALARM CONTROL PANEL
FC	FOOTCANDLE
FI	FILM ILLUMINATOR
FIXT	FIXTURE
FLT	FLOODLIGHT
FLUOR	FLUORESCENT
FLUOR FIX	FLUORESCENT FIXTURE
FT	FEET OR FOOT
FU SW	FUSED SWITCH
FVNR	FULL VOLTAGE NON-REVERSING
FVR	FULL VOLTAGE REVERSING
G OR GND	GROUND
GEN	GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GTB	GROUND TERMINAL BOX
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTOMATIC
HP	HORSEPOWER
HT	HEIGHT
HZ	HERTZ
IESNA	ILLUMINATION ENGINEERING SOCIETY OF NORTH AMERICA
IMC	INTERMEDIATE METAL CONDUIT
INCAND	INCANDESCENT
IR	INFRARED
IWH	INSTANTANEOUS WATER HEATER
J-BOX	JUNCTION BOX
kV	KILOVOLT
kVA	KILOVOLT AMPERE
kVAH	KILOVOLT AMPERE PER HOUR
kVAR	KILOVOLT AMPERE REACTIVE
kW	KILOWATT
kWH	KILOWATT HOUR
kwHM	KILOWATT HOUR METER
LED	LIGHT EMITTING DIODE
LF	LINEAR FEET (FOOT)
LM	LUMEN
LP	LIGHT POLE
LPS	LOW PRESSURE SODIUM
LRA	LOCKED ROTAR AMPS
LTCP	LOCAL TEMPERATURE CONTROL PANEL
LT	LIGHT
LTG	LIGHTING
LTNG	LIGHTNING
LV	LOW VOLTAGE
MATV	MASTER ANTENNA TELEVISION SYSTEM
MAX	MAXIMUM
MC	METAL-CLAD
MCA	MINIMUM CIRCUIT AMPS
MCB	MINIMUM CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MDP	MAIN DISTRIBUTION PANEL
MECH	MECHANICAL
MG	MOTOR GENERATOR
MH	MANHOLE
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
MLO	MAIN LUGS ONLY
MT	MOUNT
MTD	MOUNTED
MTG	MOUNTING
MTS	MANUAL TRANSFER SWITCH
MV	MEDIUM VOLTAGE
MVA	MEGAVOLT-AMPERE
MW	MEGAWATT MICROWAVE
NA	NOT APPLICABLE
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NEUT OR N	NEUTRAL
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NS	NO SCALE
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OL	OVERLOAD
P	POLE
PA	PUBLIC ADDRESS
PACS	PHYSICAL ACCESS CONTROL SYSTEM
PB	PANELBOARD, PULL BOX, OR PUSHBUTTON
PBPU	PREFABRICATED BEDSIDE PATIENT UNIT
PC	PHOTOELECTRIC CELL
PCB	POLYCHLORINATED BIPHENYL
PED	PEDESTAL
PF	POWER FACTOR
PH	PHASE
PNL	PANEL
POD	POWER OPERATED DAMPER
PoE	POWER OVER ETHERNET
PR	PAIR
PT	POTENTIAL TRANSFORMER
PTRV	POWER TYPE ROOF VENTILATION
PVC	POLYVINYL CHLORIDE (PLASTIC)
PWR	POWER
RCP	REFLECTED CEILING PLAN
REC	RECESSED
RECEPT	RECEPTACLE
RGS	RIGID GALVANIZED STEEL
RM	ROOM
RMS	ROOT MEAN SQUARE
REQD	REQUIRED
SCC	SHORT CIRCUIT CAPACITY
SE	SERVICE ENTRANCE
SD	SMOKE DETECTOR
SF	SQUARE FOOT (FEET)
SHT	SHEET
SI	INTERNATIONAL SYSTEM OF UNITS
SPEC	SPECIFICATION
SPST	SINGLE POLE, SINGLE THROW
STP	SHIELDED TWISTED PAIR
SUE	SUBSURFACE UTILITY ENGINEERING
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TC	TIMECLOCK
TCP	TEMPERATURE CONTROL PANEL
TEL	TELEPHONE
TGB	TELECOMMUNICATIONS GROUND BAR
TMGB	TELECOMMUNICATIONS MAIN GROUND BAR
TP	TWISTED PAIR
TPS	TWISTED PAIR SHIELDED
TTB	TELEPHONE TERMINAL BOARD
TV	TELEVISION
TYP	TYPICAL
UGND	UNDERGROUND
UL	UNDERWRITERS LABORATORY
UNO	UNLESS NOTED OTHERWISE
UPS	UNINTERRUPTIBLE POWER SUPPLY
UTIL	UTILITY
UTP	UNSHIELDED TWISTED PAIR
V	VOLT
VA	VOLT AMPERE
VAR	VOLT AMPERE REACTIVE
VFD	VARIABLE FREQUENCY DRIVE
VOLT	VOLTAGE
W	WATT
WH	WATER HEATER
WP	WEATHERPROOF
XFER	TRANSFER
XFMR	TRANSFORMER

FIRE ALARM LEGEND

SYMBOL	DESCRIPTION
	FIRE ALARM SPEAKER/STROBE LIGHT-WALL MOUNTED SUCH THAT THE ENTIRE LENS IS NOT LESS THAN 80" AND NOT GREATER THAN 96" AFF #cd - CANDELA SETTING W - SPEAKER TAP
	FIRE ALARM SPEAKER-WALL MOUNTED W - SPEAKER TAP
	FIRE ALARM STROBE LIGHT-WALL MOUNTED SUCH THAT THE ENTIRE LENS IS NOT LESS THAN 80" AND NOT GREATER THAN 96" AFF. #cd - CANDELA SETTING
	FIRE ALARM STROBE LIGHT-CEILING MOUNTED SUCH THAT THE ENTIRE LENS IS NOT GREATER THAN 10'-0" AFF. #cd - CANDELA SETTING
	FIRE ALARM SPEAKER/STROBE LIGHT-CEILING MOUNTED SUCH THAT THE ENTIRE LENS IS NOT GREATER THAN 10'-0" AFF. #cd - CANDELA SETTING W - SPEAKER TAP
F	MANUAL FIRE ALARM PULL STATION TO BE LOCATED WITHIN 5'-0" OF THE EXIT DOORWAY OPENING. MIN. 42" AFF, MAX. 48" AFF.
FACP	FIRE ALARM CONTROL PANEL
FAEP	FIRE ALARM EXTENDER PANEL
FAA	FIRE ALARM ANNUNCIATOR
NAC	NOTIFICATION APPLIANCE CIRCUIT EXTENDER PANEL
S	SMOKE DETECTOR
H	HEAT DETECTOR

LIGHTNING PROTECTION SYSTEM

PROVIDE A U.L. MASTER LABEL LIGHTNING PROTECTION SYSTEM WHICH COMPLIES WITH NEC, NFPA 780, AND UL 96A. SYSTEM TO CONSIST OF AIR TERMINALS (LIGHTNING RODS) SPACED AT 20 FEET ON CENTER ALONG THE PERIMETER, WITHIN 2 FEET OF EACH CORNER AND AT 50 FOOT SPACING IN MID-ROOF CONNECTED TO HEAVY CABLES EXTENDED TO GROUNDING RODS MINIMUM 10 FEET IN DEPTH. INSTALL TRANSIENT SURGE SUPPRESSORS AT ELECTRICAL AND TELEPHONE SERVICE ENTRIES. BOND LIGHTNING PROTECTION SYSTEM TO BUILDING GROUNDING ELECTRODE SYSTEM.

GENERAL NOTES

1. ALL ELECTRICAL DEVICES, FIXTURES, EQUIPMENT AND FEEDERS SHALL BE INSTALLED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, THE MANUFACTURER'S RECOMMENDED PROCEDURES, ALL APPLICABLE LOCAL AND STATE CODES, AMERICANS WITH DISABILITIES ACT, THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE, AND VA STANDARDS.
2. PROVIDE ADDITIONAL SUPPORT FOR DEVICES, FIXTURES, EQUIPMENT AND FEEDERS WHERE THE BUILDING CONSTRUCTION IS NOT SUITABLE FOR DIRECT MOUNTING.
3. FIRESTOP, DRAFTSTOP, SMOKESTOP AND/OR PROTECT THE ANNULAR SPACE AROUND ALL PENETRATIONS THROUGH WALLS, PARTITIONS, FLOORS, CEILINGS, AND ROOFS IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE, UL LISTING REQUIREMENT AND THE APPLICABLE BUILDING CODES.
4. VERIFY CEILING SYSTEMS AND PROVIDE MOUNTING ACCESSORIES, TRIMS AND ALL REQUIRED MOUNTING HARDWARE TO SUIT THE PARTICULAR INSTALLATION.
5. PROTECT EXISTING UNDERGROUND AND BUILDING INTERIOR UTILITIES DURING CONSTRUCTION.
6. BRANCH CIRCUIT CONDUCTORS SHALL BE 12 AWG COPPER MINIMUM.
7. COORDINATE ANY AND ALL WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION SO AS TO AVOID CONFLICT DURING CONSTRUCTION.
8. ALL PANELS SHALL HAVE TYPED, COMPLETED DIRECTORIES INDICATING EQUIPMENT SERVED AND ROOM NUMBER (AS INDICATED ON FINAL BUILDING ROOM SIGNAGE) OF EQUIPMENT LOCATION, OR SPARE, OR SPACE.
9. MANUFACTURER'S NAME AND MODEL NUMBER ARE GIVEN FOR DESCRIPTIVE PURPOSES, TO INDICATE A QUALITY STANDARD AND ARE NOT INTENDED TO LIMIT PRODUCTS TO A PARTICULAR MANUFACTURER. PRODUCTS DEEMED EQUAL AND APPROVED BY THE DESIGNER WILL BE ACCEPTED. ALL PRODUCTS MUST COMPLY WITH "BUY AMERICAN ACT".
10. ALL FEEDERS AND CIRCUITRY SHALL BE TORQUED PER THE PANEL, BREAKER, AND/OR PARTICULAR EQUIPMENT MANUFACTURER'S SPECIFICATIONS.
11. CIRCUITRY TO SWITCHES, RECEPTACLES, AND ALL OTHER DEVICES SHALL BE TERMINATED ON THE DEVICE'S SCREW TERMINALS.
12. MOUNTING HEIGHTS INDICATED ARE TO CENTER OF DEVICE, OUTLET, FIXTURE, OR EQUIPMENT UNLESS NOTED OTHERWISE.
13. ALL WIRE TERMINATIONS SHALL BE RATED FOR 75 DEGREES C.
14. ALL CONDUCTORS SHALL HAVE THHN/THWN INSULATION, UNLESS OTHERWISE NOTED.
15. ALL CONDUIT SHALL BE RGS OR EMT UNLESS OTHERWISE NOTED. FMC CONDUIT MAY BE USED ON VIBRATING EQUIPMENT. PVC MAY BE USED FOR UNDERGROUND OR CONCRETE-ENCASED.
16. ALL ELECTRICAL MATERIALS, DEVICES, APPLIANCES AND EQUIPMENT SHALL BE LABEL LISTED BY AN APPROVED THIRD PARTY TESTING AGENCY.
17. NO CONDUIT SHALL BE ROUTED BELOW THE LEVEL OF THE DOUBLE-TEE CONSTRUCTION. ALL CONDUITS ROUTED THROUGH DOUBLE-TEES SHALL BE THROUGH THE KNOCKOUTS PROVIDED FOR CONDUIT ROUTING. COORDINATE KNOCKOUT LOCATIONS WITH THE STRUCTURAL PLANS.
18. IN CASE OF CONFLICTS OR DISCREPANCIES WITHIN OR AMONG THE CONTRACT DRAWINGS, THE BETTER QUALITY, MORE STRINGENT REQUIREMENTS OR GREATER QUANTITY OF WORK , AS DETERMINED BY THE GOVERNMENT, SHALL BE PROVIDED.
19. CONTRACTOR SHALL PROVIDE SUFFICIENT DATA IN SUBMITTALS TO CALCULATE ARC FLASH LABEL DATA. ENGINEER SHALL CALCULATE ARC FLASH LABEL DATA AND AND CONTRACTOR SHALL USE THE DATA TO CREATE AND INSTALL LABELS FOR ALL ELECTRICAL EQUIPMENT.
20. TELECOM CABLING SHALL BE WHITE FOR DATA, BLUE FOR VOICE.

LIGHT FIXTURE SCHEDULE

SYMBOL	LABEL	TYPE OF LAMP	DRIVER	WATTS/ FIXTURE	VOLTAGE	DESCRIPTION	BASIS OF DESIGN FIXTURE (SEE NOTE 5)
	A1	LED 3910 LUMENS 4000K 80 CRI	ONE 0-10V MULTI-LEVEL DRIVER 525mA (HIGH) 175mA (LOW)	33	MVOLT	16" SQUARE PENDANT MOUNT LED PARKING STRUCTURE LUMINAIRE; TYPE V SHORT DISTRIBUTION; WITH INTEGRAL PIR OCCUPANCY SENSOR, PHOTOCELL AND FIELD ADJUSTABLE PROGRAMMABLE MULTI-LEVEL OPTION DRIVER (525mA HIGH LEVEL AND 175mA LOW LEVEL) WITH HAND-HELD REMOTE; MOUNT SUCH THAT BOTTOM OF FIXTURE IS 2" ABOVE BOTTOM OF DOUBLE TEE. CENTER BETWEEN RIBS UNLESS TO AVOID SEAMS.	CREE MODEL # IG-PD-SS-A-40K-UL-WH-PML (COORDINATE PML OPTIONS IN FIELD) OR APPROVED EQUAL
	A2	LED 7500 LUMENS 4000K 80 CRI	ONE 0-10V MULTI-LEVEL DRIVER 525mA (HIGH) 175mA (LOW)	66	MVOLT	16" SQUARE PENDANT MOUNT LED PARKING STRUCTURE LUMINAIRE; TYPE V SHORT DISTRIBUTION; WITH INTEGRAL PIR OCCUPANCY SENSOR, PHOTOCELL AND FIELD ADJUSTABLE PROGRAMMABLE MULTI-LEVEL OPTION DRIVER (525mA HIGH LEVEL AND 175mA LOW LEVEL) WITH HAND-HELD REMOTE; MOUNT SUCH THAT BOTTOM OF FIXTURE IS 2" ABOVE BOTTOM OF DOUBLE TEE. CENTER BETWEEN RIBS UNLESS TO AVOID SEAMS.	CREE MODEL # IG-PD-SS-J-40K-UL-WH-PML (COORDINATE PML OPTIONS IN FIELD) OR APPROVED EQUAL
	B	LED 4000 LUMENS 4000K 80 CRI	0-10V DIMMING DRIVER	40	MVOLT	4' LINEAR, LENSED, WALL OR CEILING SURFACE MOUNT LED, WITH OCCUPANCY SENSOR AND PHOTOCELL. DIMS TO 10% WHEN UNOCCUPIED.	LITHONIA MODEL # WL4-40L-EZ1-LP840-NES7ADCX-DIM10 OR APPROVED EQUAL
	C	LED 6000 LUMENS 4000K 80 CRI	ELEC. DRIVER	64	MVOLT	4' ROUGH-SURFACE VANDAL-RESISTANT LINEAR LED WITH CLEAR POLYCARBONATE LENS; MEDIUM DISTRIBUTION; MOUNTED AT 8'-0" AFF UNLESS NOTED OTHERWISE	LITHONIA MODEL # VAP-6000LM-PCL-MD-MVOLT-40K-80CRI OR APPROVED EQUAL
	D	120 LED 4000K 70 CRI	ELEC. DRIVER	202	MVOLT	RECTANGULAR, LED, AREA LUMINAIRE WITH BACKLIGHT CONTROL AND 9" ARM MOUNTED TO WALL. SUITABLE FOR WET LOCATIONS. TYPE IV MEDIUM DISTRIBUTION. INTEGRAL PHOTOCELL TO SWITCH FIXTURES BETWEEN FULL POWER AT NIGHT AND OFF DURING DAY.	CREE: ARE-EDG-4MB-DA-12-E-UL-*-525-P
	EB	LED	---	1.8	120/277	SURFACE MOUNT EMERGENCY DOUBLE HEAD EMERGENCY LIGHT FIXTURE WITH BATTERY BACKUP. SUITABLE FOR DAMP LOCATIONS.	LITHONIA MODEL # EU2LEDM12 OR APPROVED EQUAL
	EXA	LED	---	1	120/277	SINGLE-FACE LED EMERGENCY EXIT SIGN WITH DIRECTIONAL INDICATOR. GRAY BODY, RED FACE.	LITHONIA MODEL # WLTE-GY-1-R OR APPROVED EQUAL
	EXB	LED	---	1	120/277	DOUBLE-FACE LED EMERGENCY EXIT SIGN WITH DIRECTIONAL INDICATOR. GRAY BODY, RED FACE.	LITHONIA MODEL # WLTE-GY-2-R OR APPROVED EQUAL
	G1	LED 4000 LUMENS 4000K 80 CRI	ELEC. DRIVER	42	MVOLT	4' x 7" x 4.5" ENCLOSED AND GASKETED FIBERGLASS EXTREME ENVIRONMENT LED WITH RIBBED FROSTED ACRYLIC SHIELDING; WET LOCATION LISTED.	COLUMBIA MODEL # LXEM4-40LW-RFA-EU OR APPROVED EQUAL
	G2	LED 4000 LUMENS 4000K 80 CRI	0-10V DIMMING DRIVER	42	MVOLT	4' x 7" x 4.5" ENCLOSED AND GASKETED FIBERGLASS EXTREME ENVIRONMENT LED WITH RIBBED FROSTED ACRYLIC SHIELDING; WET LOCATION LISTED; WITH WET LOCATION RATED 360 DEGREE OCCUPANCY AND DAYLIGHT SENSOR KIT. DIMS TO 10% WHEN UNOCCUPIED.	COLUMBIA MODEL # LXEM4-40LW-RFA-EU-OS136WLK OR APPROVED EQUAL
	PP2	120 LED 4000K 70 CRI	2 ELEC. DRIVERS	404	MVOLT	TWO-HEAD, RECTANGULAR, LED, POLE-MOUNTED EXTERIOR AREA LUMINAIRE WITH BACKLIGHT CONTROL ON A 25' POLE. SUITABLE FOR WET LOCATIONS, TYPE IV MEDIUM DISTRIBUTION, EACH HEAD SHALL HAVE INTEGRAL PHOTOCELL TO SWITCH FIXTURES BETWEEN FULL POWER AT NIGHT AND OFF DURING DAY. POLE BASE, ANCHORS, AND CAST-IN-BASE CONDUIT PROVIDED BY PRECAST MANUFACTURER.	CREE MODEL # ARE-EDG-4M-DA-12-E-UL-*-525-P OR APPROVED EQUAL
	PP3	120 LED 4000K 70 CRI	3 ELEC. DRIVERS	606	MVOLT	THREE-HEAD, RECTANGULAR, LED, POLE-MOUNTED EXTERIOR AREA LUMINAIRE WITH BACKLIGHT CONTROL ON A 25' POLE. SUITABLE FOR WET LOCATIONS, SIDE HEADS SHALL TYPE IV MEDIUM DISTRIBUTION, CENTER HEAD SHALL BE TYPE II MEDIUM DISTRIBUTION. EACH HEAD SHALL HAVE INTEGRAL PHOTOCELL TO SWITCH FIXTURES BETWEEN FULL POWER AT NIGHT AND OFF DURING DAY. POLE BASES, ANCHORS, AND CAST-IN-BASE CONDUIT PROVIDED BY PRECAST MANUFACTURER.	CREE MODEL # ARE-EDG-4M-DA-12-E-UL-*-525-P ARE-EDG-2M-DA-12-E-UL-*-525-P OR APPROVED EQUAL
	S1	LED 4000K 80 CRI	REMOTE ELEC. DRIVER	16	MVOLT	1'X1'X24" LINEAR LED FIXTURE WITH 30° BEAM ANGLE, ON 12" BRACKET, ROTATABLE, WITH REMOTE NEMA 3R POWER SUPPPLY BOX. WET LISTED.	I2SYSTEMS: V3285A-23BBD, OUTDOOR E05PW PACK VLAX2-12 BRACKET
	W	LED 4000K	ELEC. DRIVER	25	MVOLT	EXTERIOR WALL MOUNTED LED LUMINAIRE WITH TWO (2) ELECTRONIC DRIVERS AND TYPE III DISTRIBUTION. SUITABLE FOR WET LOCATIONS. INTEGRAL PHOTOCELL. MOUNTED AT 10'-0" AFF UNLESS NOTED OTHERWISE	CREE MODEL # XSPW-A-0-3-F-G-U-*-P OR APPROVED EQUAL

NOTES:
1. EM - EMERGENCY LIGHT (CIRCUITED FROM EMERGENCY POWER/LIGHTING INVERTER).
   EM NL - UN-SWITCHED NIGHT LIGHT (CIRCUITED FROM EMERGENCY POWER/LIGHTING INVERTER).
2. CONTRACTOR SHALL PROVIDE LIGHT FIXTURE SHIELDS AS REQUIRED TO PREVENT LIGHT TRESPASS OVER PROPERTY LINES.
3. VERIFY ALL LIGHT FIXTURE MOUNTING TYPES AND COLORS WITH ARCHITECT.
4. MANUFACTURER'S NAME AND MODEL NUMBER ARE GIVEN FOR DESCRIPTIVE PURPOSES, TO INDICATE A QUALITY AND PERFORMANCE STANDARD, AND ARE NOT INTENDED TO LIMIT PRODUCTS TO A PARTICULAR MANUFACTURER. PRODUCTS DEEMED EQUAL AND APPROVED BY THE DESIGNER SHALL BE ACCEPTED.
5. FOR ALL LED FIXTURES, THE FIXTURE SHALL BE CAPABLE OF SELF-RESETTING TO THE SWITCHED/CONTROLLED STATE DURING ANY FLUCTUATION IN POWER SUPPLY WHERE AUTOMATIC PROTECTIVE MEASURES DISABLE THE LED LAMPS. PROVIDE A LETTER OR STATEMENT FROM THE MANUFACTURER, OR OTHER ACCEPTABLE PROOF, THAT ALL LED FIXTURES, WITH OR WITHOUT BROWNOUT PROTECTION, SHALL RETURN TO THE SWITCHED/CONTROLLED STATE AUTOMATICALLY. PROVIDE STATEMENT WITH THE FIXTURE SUBMITTALS.

BID DEDUCTS

ALT	DESCRIPTION (REFER TO SHEET GI103 FOR MORE INFORMATION)
1	DO NOT PROVIDE CCTV CAMERAS THROUGHOUT THE GARAGE. CCTV CABINET, EQUIPMENT, AND ALL CONDUIT AND CABLING TO EACH CAMERA LOCATION SHALL REMAIN IN BASE BID FOR CONNECTION TO FUTURE CAMERAS PROVIDED BY THE VA.
2	DO NOT PROVIDE ELEVATOR NUMBER 2. HOISTWAY SHAFT IS TO REMAIN, BUT REMOVE ALL EQUIPMENT ASSOCIATED WITH ELEVATOR TWO.
3	REMOVE ALL LANDSCAPING FROM SCOPE EXCEPT FOR THE BIO-RETENTION AREA. REPLACE ALL PLANNED LANDSCAPE AREAS WITH SEEDING. REMOVE THIN-SET BRICK FROM SCOPE AND PROVIDE COLORED PRECAST *CONC. PC-1 IN ITS PLACE.* REMOVE GLAZING AND STOREFRONT FROM SECONDARY STAIR TOWER. REPLACE OPENINGS WITH FALL DETERRENT DETAIL. REDUCE HEIGHT OF SECONDARY STAIR TO HEIGHT OF TOP LEVEL GARAGE SPANDREL (+37'-0") AND CONTINUE FALL DETERRENT DETAIL AROUND PERIMETER OF SECONDARY STAIR TOWER. REMOVE PREFABRICATED ALUMINUM CANOPY COVER ON TOP LEVEL OF THIRD EGRESS STAIR. REMOVE PRECAST STAIR COMPONENTS AND RAILINGS FROM LEVEL 1 UP TO LEVEL 3 OF THE THIRD EGRESS STAIR. LEAVE THE REQUIRED STAIR THAT CONNECTS LEVELS 3 AND LEVEL 4 FOR EGRESS. REMOVE GLAZING AND STOREFRONT FROM INTERIOR SIDE OF TOP FLOOR LOBBY AT MAIN STAIR TOWER. GLAZING AND STOREFRONT ON EXTERIOR SIDE OF TOP FLOOR IS TO REMAIN.
4	DO NOT PROVIDE AREA #1 - LEVEL 4. REFER TO DRAWINGS ON G1103 FOR EXTENT OF AREA DEDUCT.
5	DO NOT PROVIDE AREA #2 - LEVEL 4. REFER TO DRAWINGS ON G1103 FOR EXTENT OF AREA DEDUCT.
6	DO NOT PROVIDE AREA #3 - LEVEL 4. REFER TO DRAWINGS ON G1103 FOR EXTENT OF AREA DEDUCT.
7	DO NOT PROVIDE AREA #4 - LEVEL 3. REFER TO DRAWINGS ON G1103 FOR EXTENT OF AREA DEDUCT.

Apogee Consulting Group, P.A. COA2379 — SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION

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Revisions:	Date

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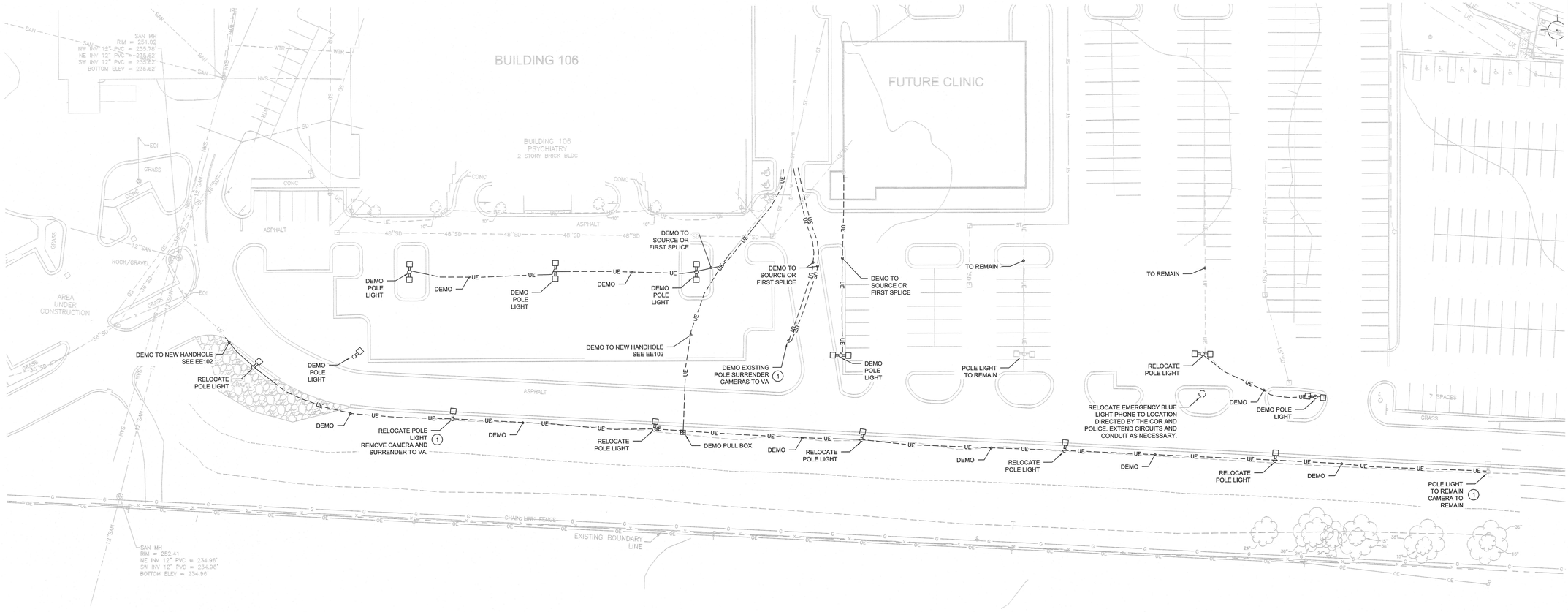
CONSTRUCTION DOCUMENTS

Drawing Title: ELECTRICAL NOTES, LEGENDS AND LIGHT FIXTURE SCHEDULE	Project Title: CONSTRUCT PARKING GARAGE	A/E Project Number: 15.1003	OFFICE OF FACILITIES MANAGEMENT
		Building Number: BLDG 108	
Approved for Design Concept: FACILITY MANAGEMENT DIVISION MANAGER	Location: COLUMBIA, SC VAMC	Drawing Number: EE001	VA Project Number: 544-306
	Date: 4 DEC 2015 / Checked By: JKM / Drawn By: SCB		VA U.S. Department of Veterans Affairs



1 ELECTRICAL DEMOLITION SITE PLAN
EE101 1" = 30'-0"

GENERAL NOTES:

A. CONTRACTOR SHALL FIELD-VERIFY ALL CONDUIT ROUTING.

B. ALL WORK AND OUTAGES SHALL BE COORDINATED WITH COR AND WITH OTHER TRADES.

C. ALL CIRCUIT CONTINUITY SHALL BE MAINTAINED UNLESS EVERY DEVICE ON A CIRCUIT IS BEING DEMOLISHED.

D. WHERE UNDERGROUND LINES ARE MARKED TO BE DEMOLISHED, REMOVE CONDUCTORS AND DEMO STUB-UPS TO BELOW GRADE. CONDUIT MAY BE ABANDONED UNDERGROUND WHERE IT DOES NOT INTERFERE WITH CONSTRUCTION.

(#) SHEET KEY NOTES:

1 PROJECT TO INSTALL CAMERAS, FED FROM THE EAST IS CURRENTLY UNDERWAY AND WILL BE COMPLETED PRIOR TO GARAGE CONSTRUCTION. CONTRACTOR SHALL REMOVE CAMERAS FROM POLES SHOWN AND SURRENDER CAMERAS TO THE VA. CONTRACTOR SHALL DEMOLISH CAMERA POWER AND DATA LINES BACK TO EXISTING-TO-REMAIN CAMERA SHOWN. ALL REMAINING CAMERAS SHALL REMAIN OPERATIONAL.

Apogee Consulting Group, P.A. C02379 CERTIFICATE OF AUTHORIZATION SOUTH CAROLINA

Revisions:	Date

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CONSTRUCTION DOCUMENTS

Drawing Title: ELECTRICAL DEMOLITION SITE PLAN	Project Title: CONSTRUCT PARKING GARAGE	A/E Project Number: 15.1003	OFFICE OF FACILITIES MANAGEMENT
		Building Number: BLDG 108	
Approved for Design Concept: FACILITY MANAGEMENT DIVISION MANAGER	Location: COLUMBIA, SC VAMC	Drawing Number: EE101	VA Project Number: 544-306
	Date: 4 DEC 2015 / Checked By: JKM / Drawn By: SCB		VA | U.S. Department of Veterans Affairs

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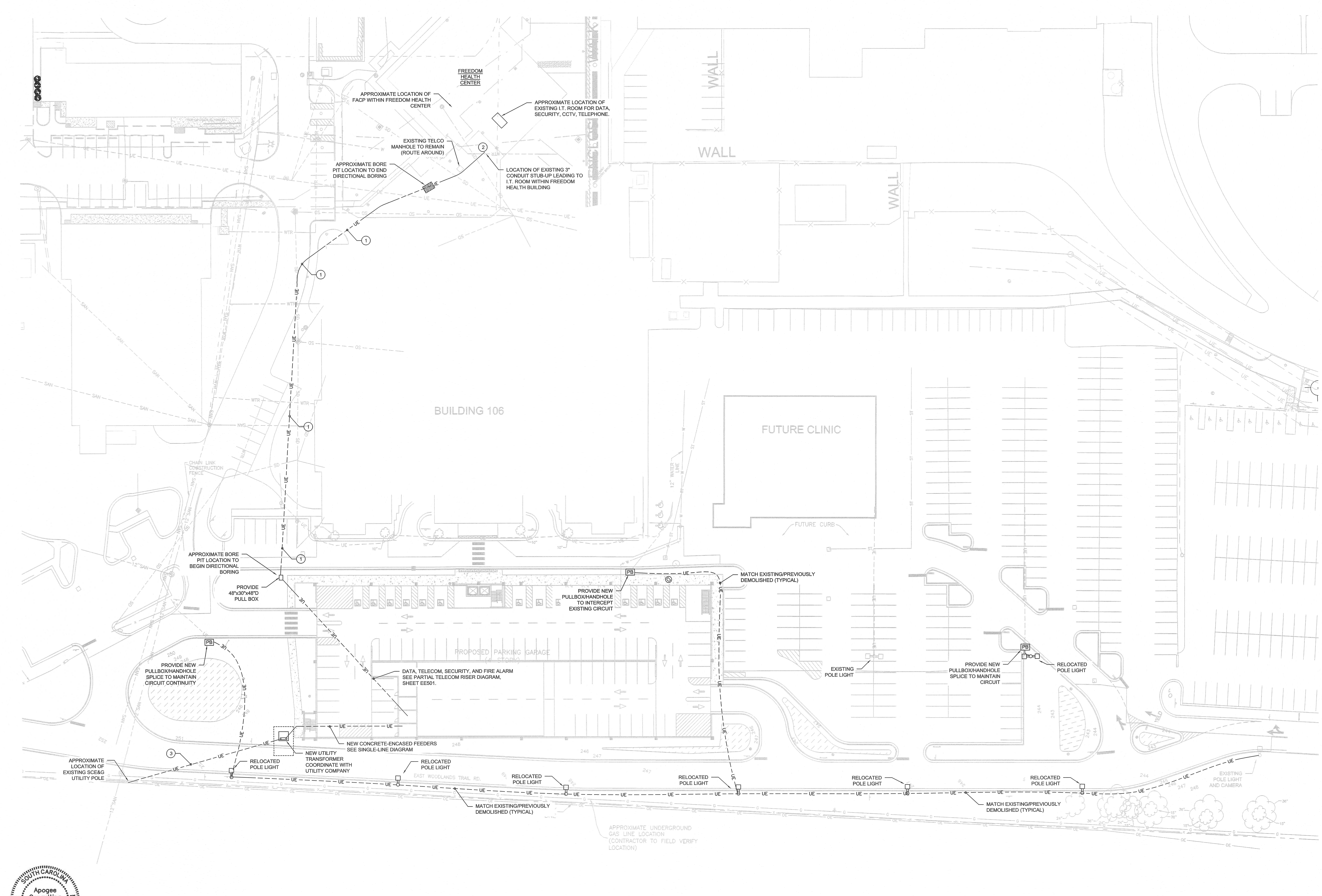

1 EE102 ELECTRICAL SITE PLAN
1" = 30'-0"

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GENERAL NOTES:

A. CONTRACTOR SHALL FIELD-VERIFY ALL CONDUIT ROUTING.

B. ALL WORK AND OUTAGES SHALL BE COORDINATED WITH COR AND WITH OTHER TRADES.

C. AFTER WORK IS DONE, CONTRACTOR SHALL RESTORE AFFECTED AREAS TO THEIR ORIGINAL CONDITION.

D. UNO, ALL RELOCATED FIXTURES SHALL REMAIN ON SAME CIRCUIT. CIRCUIT CONTINUITY SHALL BE MAINTAINED.

E. HAND HOLES SHALL BE TIER 15 MINIMUM. HAND HOLES LOCATED IN ROAD OR PARKING AREA SUBJECT TO VEHICULAR TRAFFIC SHALL BE DESIGNED FOR AASHTO H-20 LOADING.

F. ALL LIGHTING CIRCUIT CONDUIT SHALL BE DIRECT-BURIED SCHED. 40 PVC MINIMUM. CONDUIT BENEATH ROAD OR PARKING AREA SHALL BE SCHED. 80 PVC. NEW CONDUIT SHALL BE MIN 24" DEEP.

G. INSTALL ALL POLE LIGHTS ACCORDING TO POLE BASE DETAIL, SHEET EE502.

H. CONTRACTOR SHALL PROVIDE HOUSE-SIDE SHIELDS ON POLE LIGHT HEADS ALONG THE PROPERTY LINE TO LIMIT LIGHT TRESPASS ACROSS PROPERTY LINE.

(#) SHEET KEY NOTES:

1 CONTRACTOR SHALL VERIFY TELECOM CONDUIT ROUTE WITH GROUND PENETRATING RADAR OR OTHER SUE METHODS AS NECESSARY TO IDENTIFY THE EXISTING UTILITIES ALONG THE ROUTE. CONDUIT INSTALLATION SHALL BE BY DIRECTIONAL BORE TO PASS BENEATH EXISTING UTILITIES UNTIL ROUTE IS CLEAR FOR TRENCHING. CONDUIT SHALL BE ENCASED IN 3" CONCRETE (3000 PSI) WHERE TRENCHED.

2 INTERCEPT EXISTING 3" CONDUIT STUB-UP TO ENTER FREEDOM HEALTH CENTER.

3 COORDINATE WITH SCE&G FOR PRIMARY POWER FEED. CONTRACTOR SHALL PROVIDE CONCRETE PAD, PRIMARY FEEDER CONDUIT AND DROP POLE RISER PER SCE&G UNDERGROUND COMMERCIAL SERVICE MANUAL. UNDERGROUND PRIMARY FEEDER CONDUIT SHALL BE ENCASED IN MIN. 3" CONCRETE, MIN 3000 PSI.

Revisions:	Date

VA U.S. Department of Veterans Affairs
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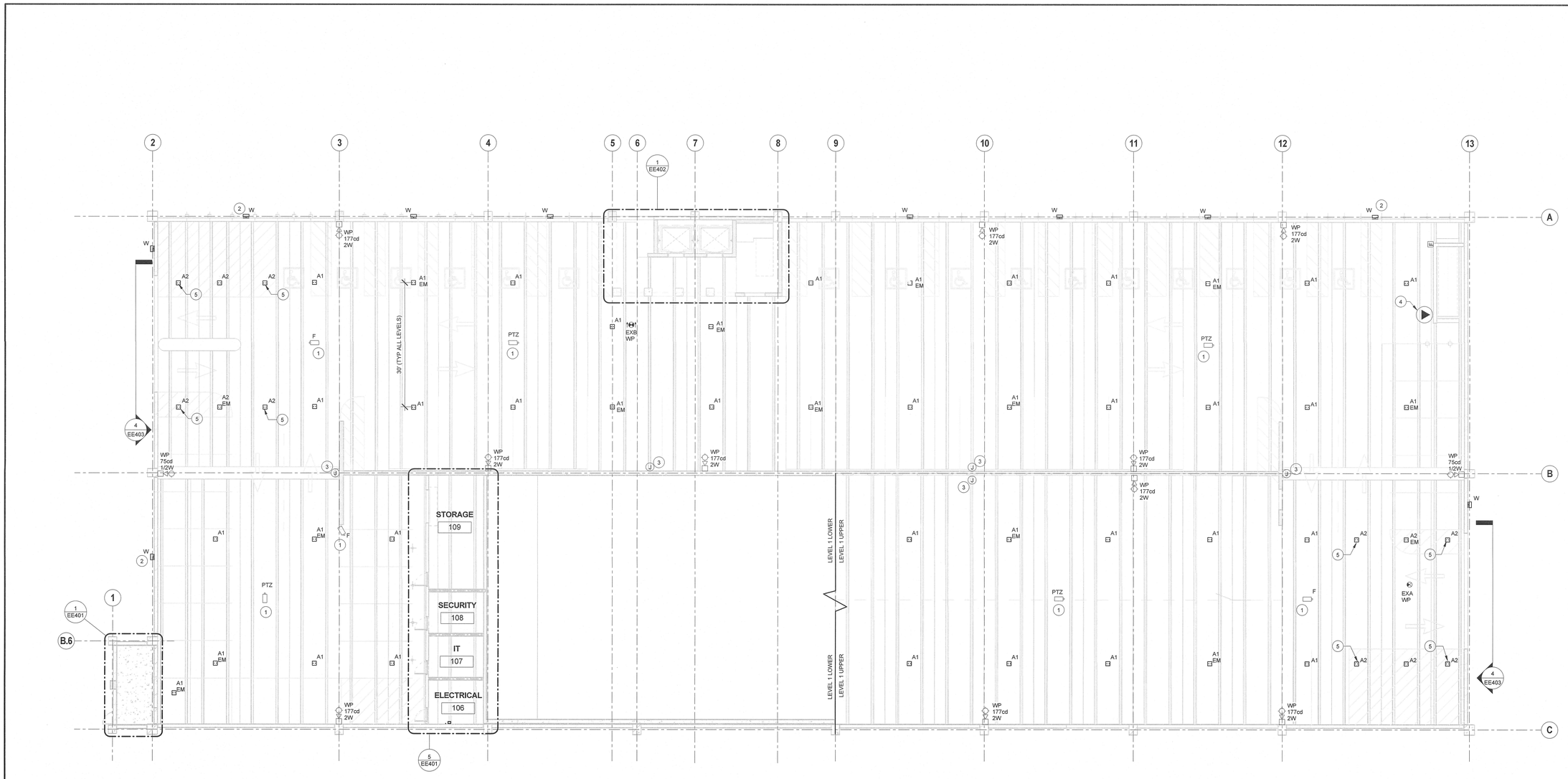
CONSTRUCTION DOCUMENTS

Drawing Title	Project Title	A/E Project Number	
ELECTRICAL SITE PLAN	CONSTRUCT PARKING GARAGE	15.1003	OFFICE OF FACILITIES MANAGEMENT
		Building Number: BLDG 108	
Approved for Design Concept: FACILITY MANAGEMENT DIVISION MANAGER	Location: COLUMBIA, SC VAMC	Drawing Number	VA Project Number: 544-306
	Date: 4 DEC 2015 / Checked By: JKM / Drawn By: SCB	EE102	VA U.S. Department of Veterans Affairs



1 EE103 LEVEL 1 ELECTRICAL PLAN
3/32" = 1'-0"

GENERAL NOTES:

A. ALL LIGHTING CONDUCTORS SHALL BE 2-12 AWG, 1-12 AWG EG, IN 3/4" CONDUIT, UNLESS NOTED OTHERWISE.

B. ALL RECEPTACLE CONDUCTORS SHALL BE 2-12 AWG, 1-12 AWG EG, IN 3/4" CONDUIT, UNLESS NOTED OTHERWISE.

C. ALL NORMAL INTERIOR GARAGE LIGHTING ON THIS SHEET SHALL BE CIRCUITED FROM 'H1'-14.

D. ALL EMERGENCY (EM) INTERIOR GARAGE LIGHTING ON THIS SHEET SHALL BE CIRCUITED FROM 'INVH1'-2.

E. ALL NORMAL EXTERIOR GARAGE WALL MOUNTED LIGHTING ON THIS SHEET SHALL BE CIRCUITED FROM 'H1'-19.

F. ALL EXTERIOR WALL MOUNTED LIGHTING SHALL BE MOUNTED DIRECTLY TO SPANDRELS. BOXES AND CONDUIT SHALL NOT BE INSTALLED ON OUTSIDE SURFACE OF GARAGE. CONDUCTORS ARE TO BE ROUTED DIRECTLY THROUGH SPANDREL TO JUNCTION BOX MOUNTED ON THE INSIDE SURFACE OF SPANDREL.

G. SEE ENLARGEMENT VIEWS FOR CIRCUITING OF DEVICES IN ENLARGEMENT VIEWS.

SHEET KEY NOTES:

1 COORDINATE EXACT LOCATION OF CAMERA WITH SECURITY DEPARTMENT PRIOR TO ROUGH-IN.

2 LIGHT FIXTURE TO BE FASTENED DIRECTLY TO SPANDREL (CENTERED VERTICALLY). BOXES AND CONDUIT SHALL NOT BE INSTALLED ON OUTSIDE SURFACE OF GARAGE. CONDUCTORS ARE TO BE ROUTED DIRECTLY THROUGH SPANDREL TO JUNCTION BOX MOUNTED ON THE INSIDE SURFACE OF SPANDREL. (TYPICAL OF ALL SPANDREL-MOUNTED FIXTURES.)

3 PROVIDE A 3-GANG BOX IN NEMA 4 RATED NONMETALLIC ENCLOSURE AT 18" AFF BELOW FIRE EXTINGUISHER CABINET FOR FIRE EXTINGUISHER MONITORING DEVICES. CONNECT EACH BOX TO THE FIRE EXTINGUISHER CABINET WITH 3/4" EMT. VERIFY AND COORDINATE WITH FIRE EXTINGUISHER MONITORING PROVIDER. FIRE EXTINGUISHER MONITORING SHALL BE COMPATABLE WITH HOSPITAL'S EXISTING SYSTEM BY EN-GUAGE.

4 PROVIDE EMERGENCY TELEPHONE PEDESTALL WITH BLUE LIGHT. PROVIDE 2-4PR UTP IN 3/4" CONDUIT TO DATA RACK IN IT ROOM (USE FIBER FOR GREATER THAN 295'). TERMINATION BY VA. STAIR 3 EMERGENCY PHONES SHALL BE CIRCUITED FROM 'INVL1'-9

5 CIRCUIT ONLY EIGHT (8) TYPE A2 LIGHT FIXTURE AS NOTED VIA ASTRONOMICAL TIME CLOCK TO TURN ON AT DAWN AND OFF AT DUSK. CONTRACTOR TO PROVIDE TIME CLOCK AS REQUIRED.

SOUTH CAROLINA Apogee Consulting Group, P.A. CO2379 CERTIFICATE OF AUTHORIZATION

Revisions:	Date

VA U.S. Department of Veterans Affairs

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CONSTRUCTION DOCUMENTS

Drawing Title: LEVEL 1 ELECTRICAL PLAN	Project Title: CONSTRUCT PARKING GARAGE	A/E Project Number: 15.1003	OFFICE OF FACILITIES MANAGEMENT
		Building Number: BLDG 108	
Approved for Design Concept: FACILITY MANAGEMENT DIVISION MANAGER	Location: COLUMBIA, SC VAMC	Drawing Number: EE103	VA Project Number: 544-306
	Date: 4 DEC 2015 / Checked By: JKM / Drawn By: SCB		VA U.S. Department of Veterans Affairs

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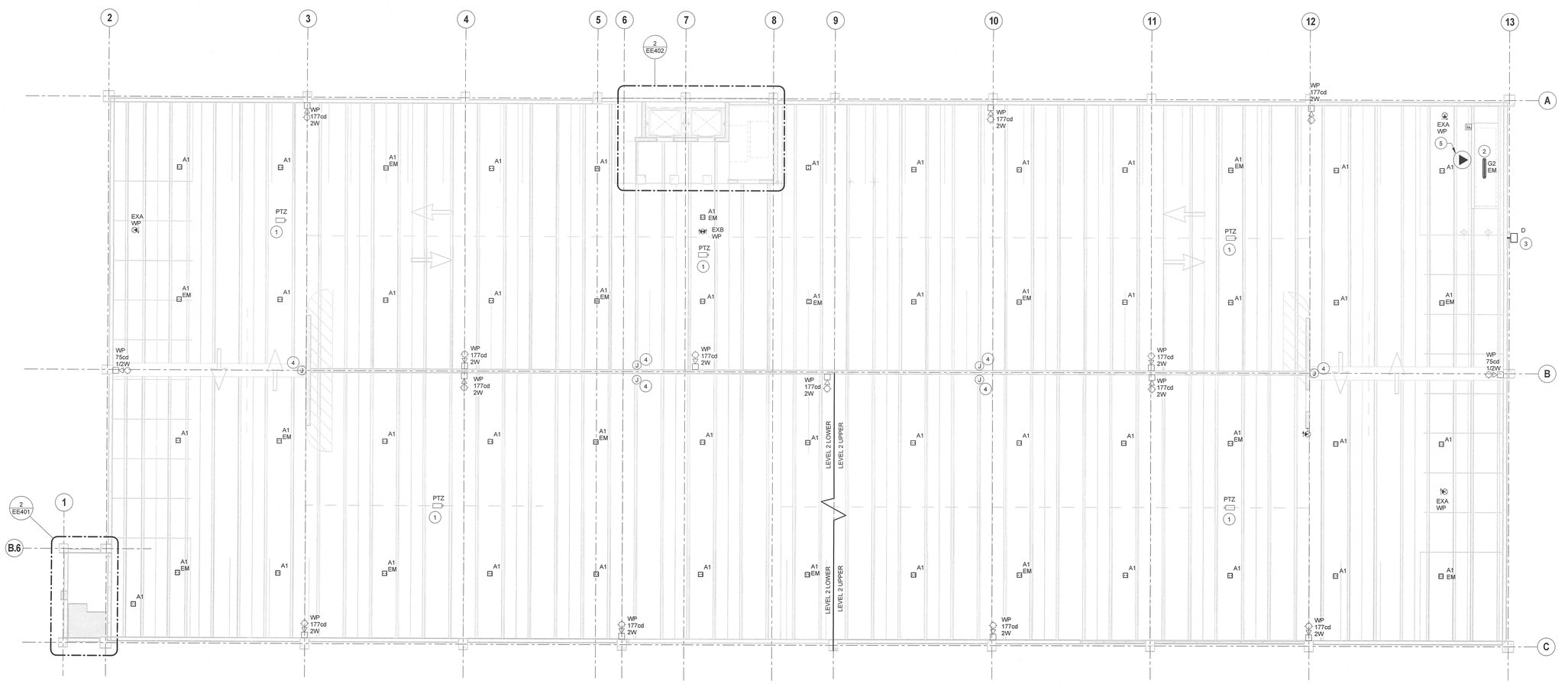

1 EE104 LEVEL 2 ELECTRICAL PLAN
3/32" = 1'-0"

GENERAL NOTES:

A. ALL LIGHTING CONDUCTORS SHALL BE 2-12 AWG, 1-12 AWG EG, IN 3/4" CONDUIT, UNLESS NOTED OTHERWISE.

B. ALL RECEPTACLE CONDUCTORS SHALL BE 2-12 AWG, 1-12 AWG EG, IN 3/4" CONDUIT, UNLESS NOTED OTHERWISE.

C. ALL NORMAL INTERIOR GARAGE LIGHTING ON THIS SHEET SHALL BE CIRCUITED FROM 'H1'-16.

D. ALL EMERGENCY (EM) INTERIOR GARAGE LIGHTING ON THIS SHEET SHALL BE CIRCUITED FROM 'INVH1'-4.

E. ALL NORMAL EXTERIOR GARAGE WALL MOUNTED LIGHTING ON THIS SHEET SHALL BE CIRCUITED FROM 'H1'-19.

F. SEE ENLARGEMENT VIEWS FOR CIRCUITING OF DEVICES WITHIN ENLARGEMENT VIEWS.

⑧ SHEET KEY NOTES:

1. COORDINATE EXACT LOCATION OF CAMERA WITH SECURITY DEPARTMENT PRIOR TO ROUGH-IN.
2. INSTALL ON UNDERSIDE OF STAIR. CIRCUIT WITH TYPE A EM FIXTURES ON SAME LEVEL.
3. LIGHT FIXTURE TO BE FASTENED DIRECTLY TO SPANDREL (CENTERED VERTICALLY). BOXES AND CONDUIT SHALL NOT BE INSTALLED ON OUTSIDE SURFACE OF GARAGE. CONDUCTORS ARE TO BE ROUTED DIRECTLY THROUGH SPANDREL TO JUNCTION BOX MOUNTED ON THE INSIDE SURFACE OF SPANDREL (TYPICAL OF ALL SPANDREL-MOUNTED FIXTURES.)
4. PROVIDE A 3-GANG BOX IN NEMA 4 RATED NONMETALLIC ENCLOSURE AT 18" AFF BELOW FIRE EXTINGUISHER CABINET FOR FIRE EXTINGUISHER MONITORING DEVICES. CONNECT EACH BOX TO THE FIRE EXTINGUISHER CABINET WITH 3/4" EMT. VERIFY AND COORDINATE WITH FIRE EXTINGUISHER MONITORING PROVIDER. FIRE EXTINGUISHER MONITORING SHALL BE COMPATABLE WITH HOSPITAL'S EXISTING SYSTEM BY EN-GUAGE.
5. PROVIDE EMERGENCY TELEPHONE PEDESTALL WITH BLUE LIGHT. PROVIDE 2-4PR UTP IN 3/4" CONDUIT TO DATA RACK IN IT ROOM (USE FIBER FOR GREATER THAN 295'). TERMINATION BY VA. STAIR 3 EMERGENCY PHONES SHALL BE CIRCUITED FROM 'INVL1'-9

SOUTH CAROLINA
Apogee Consulting Group, P.A.
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CONSTRUCTION DOCUMENTS

Drawing Title: LEVEL 2 ELECTRICAL PLAN	Project Title: CONSTRUCT PARKING GARAGE	A/E Project Number: 15.1003	OFFICE OF FACILITIES MANAGEMENT
		Building Number: BLDG 108	
Approved for Design Concept: FACILITY MANAGEMENT DIVISION MANAGER	Location: COLUMBIA, SC VAMC	Drawing Number: EE104	VA Project Number: 544-306
	Date: 4 DEC 2015 / Checked By: JKM / Drawn By: SCB		VA | U.S. Department of Veterans Affairs

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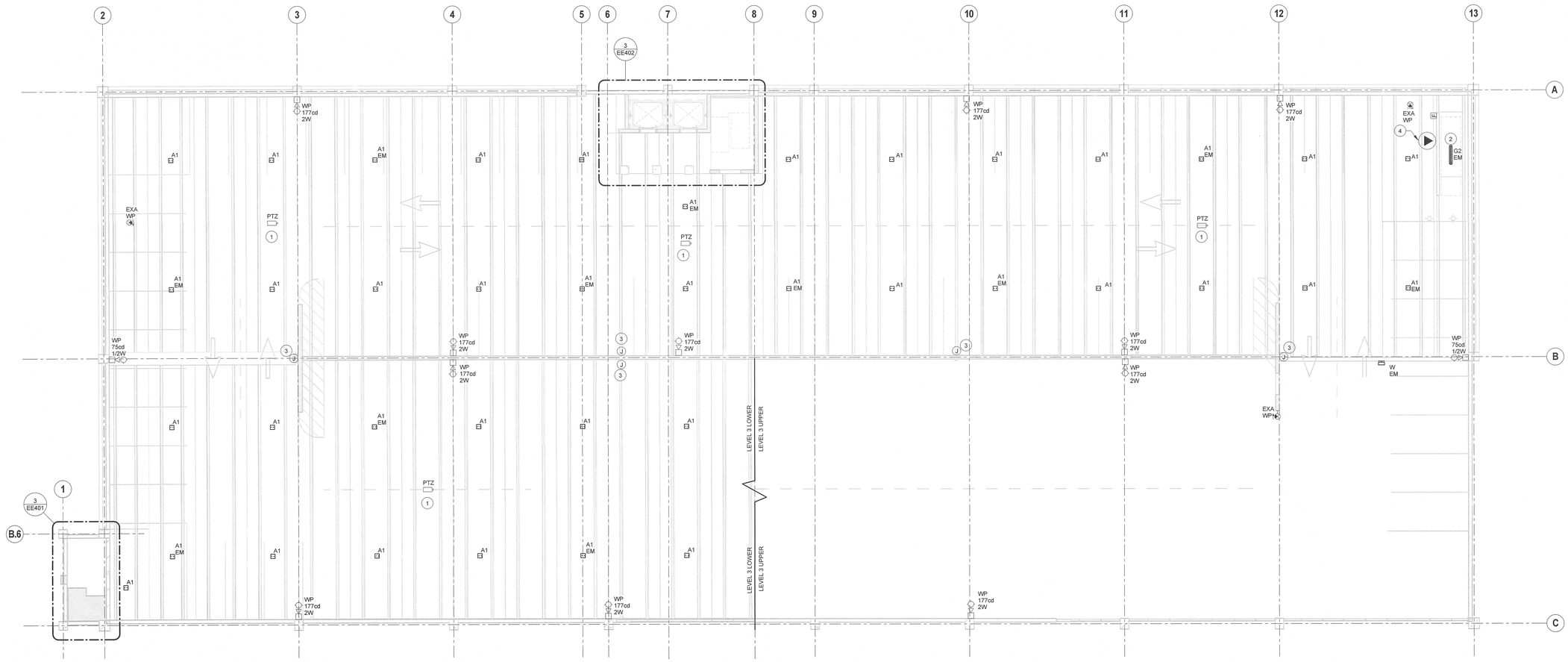

1 LEVEL 3 ELECTRICAL PLAN
EE105 3/32" = 1'-0"

GENERAL NOTES:

A. ALL LIGHTING CONDUCTORS SHALL BE 2-12 AWG, 1-12 AWG EG, IN 3/4" CONDUIT, UNLESS NOTED OTHERWISE.

B. ALL RECEPTACLE CONDUCTORS SHALL BE 2-12 AWG, 1-12 AWG EG, IN 3/4" CONDUIT, UNLESS NOTED OTHERWISE.

C. ALL NORMAL INTERIOR GARAGE LIGHTING ON THIS SHEET SHALL BE CIRCUITED FROM 'H1'-18.

D. ALL EMERGENCY (EM) INTERIOR GARAGE LIGHTING ON THIS SHEET SHALL BE CIRCUITED FROM 'INVH1'-8.

E. SEE ENLARGEMENT VIEWS FOR CIRCUITING OF DEVICES WITHIN ENLARGEMENT VIEWS.

SHEET KEY NOTES:

1 COORDINATE EXACT LOCATION OF CAMERA WITH SECURITY DEPARTMENT PRIOR TO ROUGH-IN.

2 INSTALL ON UNDERSIDE OF STAIR. CIRCUIT WITH TYPE A EM FIXTURES ON SAME LEVEL.

3 PROVIDE A 3-GANG BOX IN NEMA 4 RATED NONMETALLIC ENCLOSURE AT 18" AFF BELOW FIRE EXTINGUISHER CABINET FOR FIRE EXTINGUISHER MONITORING DEVICES. CONNECT EACH BOX TO THE FIRE EXTINGUISHER CABINET WITH 3/4" EMT. VERIFY AND COORDINATE WITH FIRE EXTINGUISHER MONITORING PROVIDER. FIRE EXTINGUISHER MONITORING SHALL BE COMPATABLE WITH HOSPITAL'S EXISTING SYSTEM BY EN-GUAGE.

4 PROVIDE EMERGENCY TELEPHONE PEDESTALL WITH BLUE LIGHT. PROVIDE 2-4PR UTP IN 3/4" CONDUIT TO DATA RACK IN IT ROOM (USE FIBER FOR GREATER THAN 295'). TERMINATION BY VA. STAIR 3 EMERGENCY PHONES SHALL BE CIRCUITED FROM 'INVL1'-9

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Apogee Consulting Group, P.A.
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CONSTRUCTION DOCUMENTS

Drawing Title: LEVEL 3 ELECTRICAL PLAN	Project Title: CONSTRUCT PARKING GARAGE	A/E Project Number: 15.1003	OFFICE OF FACILITIES MANAGEMENT
		Building Number: BLDG 108	
Approved for Design Concept: FACILITY MANAGEMENT DIVISION MANAGER	Location: COLUMBIA, SC VAMC	Drawing Number: EE105	VA Project Number: 544-306
	Date: 4 DEC 2015 / Checked By: JKM / Drawn By: SCB		VA U.S. Department of Veterans Affairs

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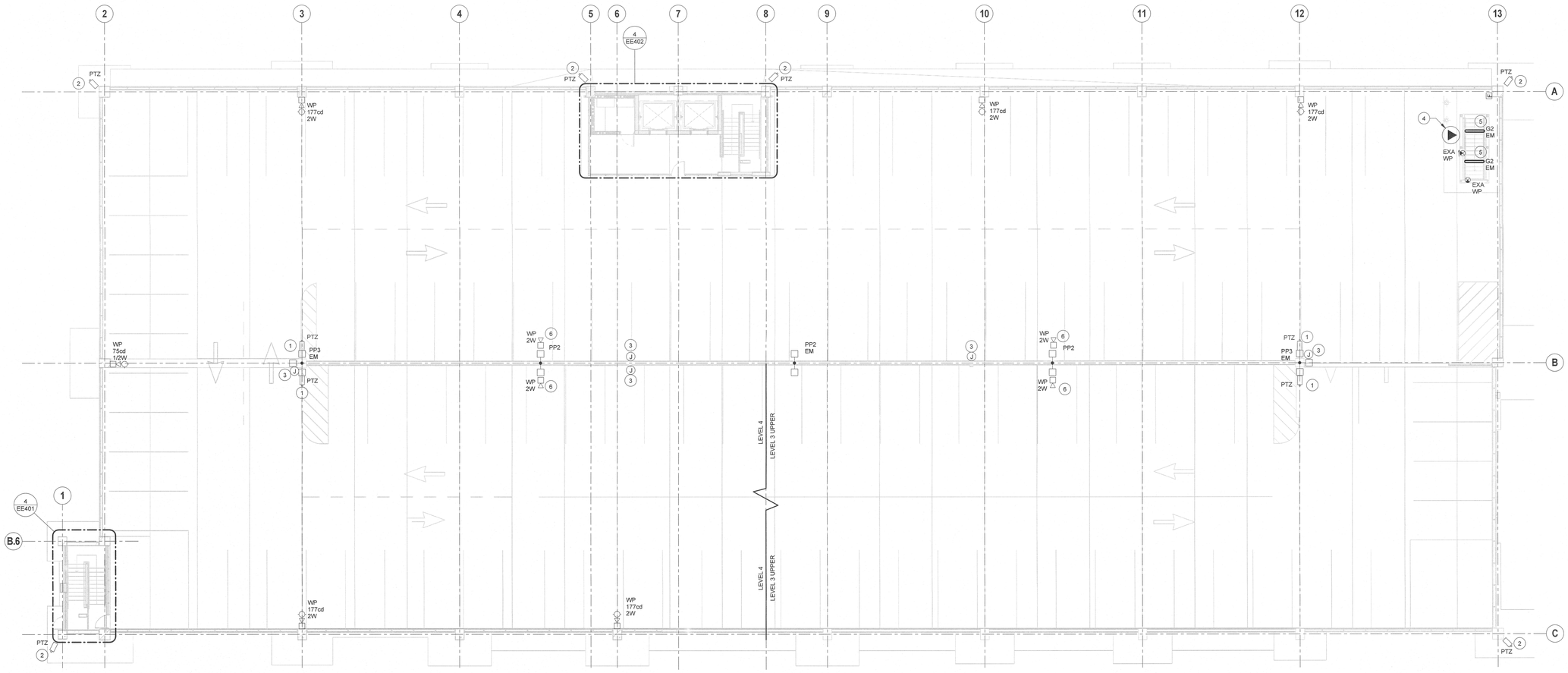

1 EE106 LEVEL 4 ELECTRICAL PLAN
3/32" = 1'-0"

GENERAL NOTES:

A. ALL LIGHTING CONDUCTORS SHALL BE 2-12 AWG, 1-12 AWG EG, IN 3/4" CONDUIT, UNLESS NOTED OTHERWISE.

B. ALL RECEPTACLE CONDUCTORS SHALL BE 2-12 AWG, 1-12 AWG EG, IN 3/4" CONDUIT, UNLESS NOTED OTHERWISE.

C. ALL NORMAL EXTERIOR GARAGE POLE LIGHTING ON THIS SHEET SHALL BE CIRCUITED FROM 'H1'-20.

D. ALL EMERGENCY (EM) EXTERIOR GARAGE POLE LIGHTING ON THIS SHEET SHALL BE CIRCUITED FROM 'INVH1'-8.

E. SEE ENLARGEMENT VIEWS FOR CIRCUITING OF DEVICES WITHIN ENLARGEMENT VIEWS.

SHEET KEY NOTES:

1 PTZ CAMERA TO BE MOUNTED ON POLE 15'-0" ABOVE LEVEL 4. COORDINATE EXACT LOCATION OF CAMERA WITH SECURITY DEPARTMENT PRIOR TO ROUGH-IN. COPPER CABLING WITHIN LIGHT POLE SHALL HAVE 600V-RATED INSULATION AND INSTALLED IN INNERDUCT.

2 CORNER MOUNTED PTZ CAMERA. COORDINATE EXACT LOCATION OF CAMERA WITH SECURITY DEPARTMENT PRIOR TO ROUGH-IN.

3 PROVIDE A 3-GANG BOX IN NEMA 4 RATED NONMETALLIC ENCLOSURE AT 18" AFF BELOW FIRE EXTINGUISHER CABINET FOR FIRE EXTINGUISHER MONITORING DEVICES. CONNECT EACH BOX TO THE FIRE EXTINGUISHER CABINET WITH 3/4" EMT. VERIFY AND COORDINATE WITH FIRE EXTINGUISHER MONITORING PROVIDER. FIRE EXTINGUISHER MONITORING SHALL BE COMPATABLE WITH HOSPITAL'S EXISTING SYSTEM BY EN-GUAGE.

4 PROVIDE EMERGENCY TELEPHONE PEDESTALL WITH BLUE LIGHT. PROVIDE 2-4PR UTP IN 3/4" CONDUIT TO DATA RACK IN IT ROOM (USE FIBER FOR GREATER THAN 295'). TERMINATION BY VA. STAIR 3 EMERGENCY PHONES SHALL BE CIRCUITED FROM 'INVL1'-9

5 INSTALL ON UNDERSIDE OF CANOPY. CIRCUIT WITH TYPE A EM FIXTURES ON LEVEL 3.

6 INSTALL SPEAKER ON POLE. CABLING WITHIN POLE SHALL HAVE 600V-RATED INSULATION AND INSTALLED IN INNERDUCT.

LIGHTNING PROTECTION SYSTEM

PROVIDE A U.L. MASTER LABEL LIGHTNING PROTECTION SYSTEM WHICH COMPLIES WITH NEC, NFPA 780, AND UL 96A. SYSTEM TO CONSIST OF AIR TERMINALS (LIGHTNING RODS) SPACED AT 20 FEET ON CENTER ALONG THE PERIMETER, WITHIN 2 FEET OF EACH CORNER AND AT 50 FOOT SPACING IN MID-ROOF CONNECTED TO HEAVY CABLES EXTENDED TO GROUNDING RODS MINIMUM 10 FEET IN DEPTH. INSTALL TRANSIENT SURGE SUPPRESSORS AT ELECTRICAL AND TELEPHONE SERVICE ENTRIES. BOND LIGHTNING PROTECTION SYSTEM TO BUILDING GROUNDING ELECTRODE SYSTEM.

SOUTH CAROLINA Apogee Consulting Group, P.A. CO2379 CERTIFICATE OF AUTHORIZATION

Revisions:	Date

U.S. Department of Veterans Affairs

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CONSTRUCTION DOCUMENTS

Drawing Title: LEVEL 4 ELECTRICAL PLAN	Project Title: CONSTRUCT PARKING GARAGE	A/E Project Number: 15.1003	OFFICE OF FACILITIES MANAGEMENT
		Building Number: BLDG 108	
Approved for Design Concept: FACILITY MANAGEMENT DIVISION MANAGER	Location: COLUMBIA, SC VAMC	Drawing Number: EE106	VA Project Number: 544-306
	Date: 4 DEC 2015 / Checked By: JKM / Drawn By: SCB		VA U.S. Department of Veterans Affairs

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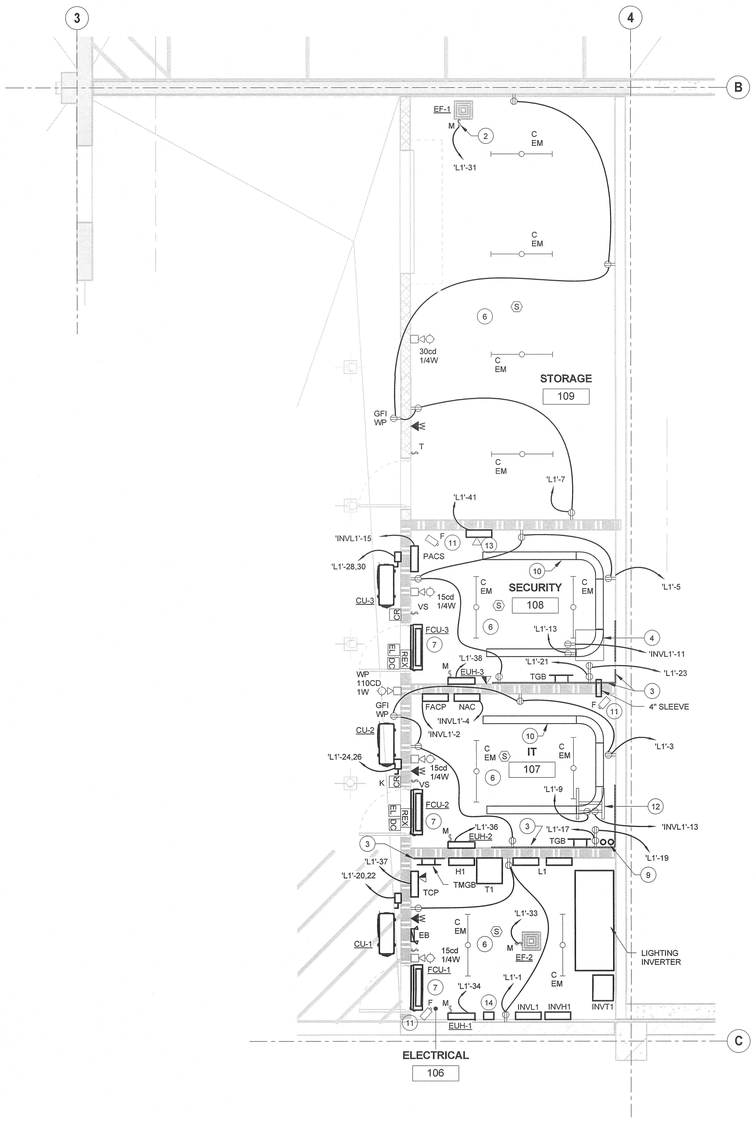
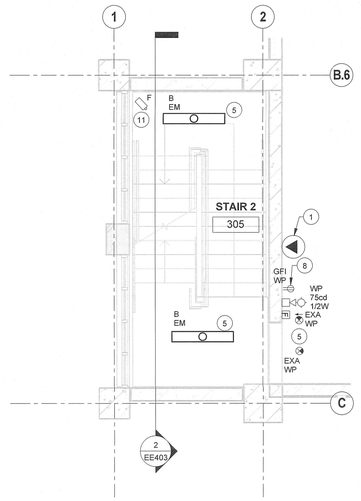
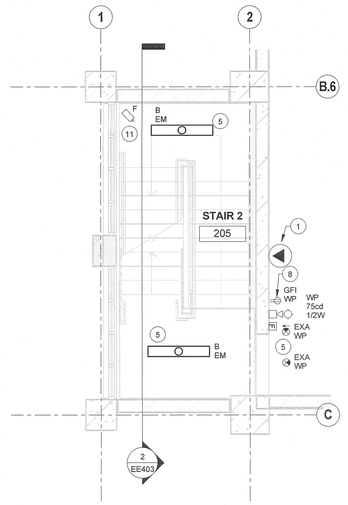


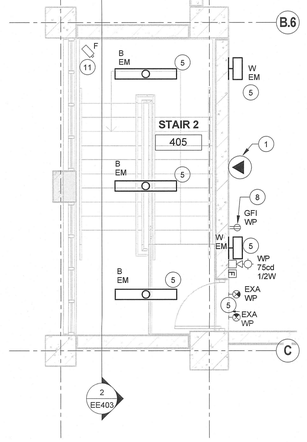
5 EE401 LEVEL 1 ELECTRICAL ENLARGEMENT
1/4" = 1'-0"



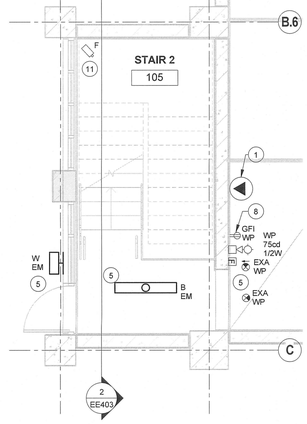
3 EE401 LEVEL 3 STAIR 2 ELECTRICAL ENLARGEMENT
1/4" = 1'-0"



2 EE401 LEVEL 2 STAIR 2 ELECTRICAL ENLARGEMENT
1/4" = 1'-0"



4 EE401 LEVEL 4 STAIR 2 ELECTRICAL ENLARGEMENT
1/4" = 1'-0"



1 EE401 LEVEL 1 STAIR 2 ELECTRICAL ENLARGEMENT
1/4" = 1'-0"

GENERAL NOTES:

A. ALL LIGHTING CONDUCTORS SHALL BE 2-12 AWG, 1-12 AWG EG, IN 3/4" CONDUIT, UNLESS NOTED OTHERWISE.

B. ALL RECEPTACLE CONDUCTORS SHALL BE 2-12 AWG, 1-12 AWG EG, IN 3/4" CONDUIT, UNLESS NOTED OTHERWISE.

C. VERIFY LOCATION AND ELECTRICAL REQUIRMENTS OF ALL MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR.

D. SEE SHEET EE601 FOR EQUIPMENT CONDUCTOR SCHEDULE.

E. ALL EXTERIOR WALL MOUNTED LIGHTING SHALL BE MOUNTED DIRECTLY TO SPANDRELS. BOXES AND CONDUIT SHALL NOT BE INSTALLED ON OUTSIDE SURFACE OF GARAGE. CONDUCTORS ARE TO BE ROUTED DIRECTLY THROUGH SPANDREL TO JUNCTION BOX MOUNTED ON THE INSIDE SURFACE OF SPANDREL.

SHEET KEY NOTES:

1 PROVIDE EMERGENCY TELEPHONE PEDESTALL WITH BLUE LIGHT. PROVIDE 2-4PR UTP IN 3/4" CONDUIT TO DATA RACK IN IT ROOM (USE FIBER FOR GREATER THAN 295'). TERMINATION BY VA. STAIR 2 EMERGENCY PHONES SHALL BE CIRCUITED FROM 'INVL1'-7

2 PROVIDE RELAY WITH 277V COIL TO CONTROL 120 VOLT FAN WITH 277 VOLT LIGHTING CIRCUIT SO THAT FAN IS CONTROLLED WITH LIGHTS.

3 PROVIDE WALL MOUNTED 4'X8'X3/4" PLYWOOD COMMUNICATIONS BACKBOARD. PLYWOOD SHALL BE FIRE-RATED AND SHALL CARRY LABEL WITH FIRE-RATING.

4 PROVIDE 19" CCTV CABINET PER DETAIL 6/EE502.

5 ALL STAIR 2 LIGHTING AND EXIT SIGNS SHALL BE CIRCUITED FROM 'INVH1'-5.

6 ALL LIGHTING IN ELECTRICAL 106, IT 107, SECURITY 108 AND STORAGE 109 SHALL BE CIRCUITED FROM 'INVH1'-9.

7 FAN COIL UNIT (FCU) POWERED FROM OUTDOOR CONDENSING UNIT (CU).

8 CIRCUIT STAIR 2 RECEPTACLES FROM 'L1'-25.

9 INCOMING SIGNAL CONDUIT STUB-UP (FROM FREEDOM HEALTH CENTER) SHALL BE BY 90-DEGREE SWEEP.

10 PROVIDE CABLE LADDER TRAY PER DETAILS ON SHEET EE502.

11 COORDINATE EXACT LOCATION OF CAMERA WITH SECURITY DEPARTMENT PRIOR TO ROUGH-IN.

12 PROVIDE TWO-POST 19" TELECOMMUNICATIONS RACK WITH VERTICAL AND HORIZONTAL WIRE MANAGEMENT. SEE DETAIL 5/EE502.

13 PROVIDE FIRE EXTINGUISHER MONITORING CABINET AND DATA DROP. FIRE EXTINGUISHER MONITORING SYSTEM SHALL BE COMPATABLE WITH EXISTING HOSPITAL SYSTEM BY EN-GUAGE.

14 TIME CLOCK FOR EIGHT (8) TYPE A2 PARKING GARAGE ENTRY LIGHTS. SEE E-103 FOR FIXTURE LOCATIONS.

SOUTH CAROLINA Apogee Consulting Group, P.A. C02379 CERTIFICATE OF AUTHORIZATION

Revisions:	Date

VA U.S. Department of Veterans Affairs

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CONSTRUCTION DOCUMENTS

Drawing Title: ELECTRICAL ENLARGEMENTS	Project Title: CONSTRUCT PARKING GARAGE	A/E Project Number: 15.1003	OFFICE OF FACILITIES MANAGEMENT
		Building Number: BLDG 108	
Approved for Design Concept: FACILITY MANAGEMENT DIVISION MANAGER	Location: COLUMBIA, SC VAMC	Drawing Number: EE401	VA Project Number: 544-306
	Date: 4 DEC 2015 / Checked By: JKM / Drawn By: SCB		VA U.S. Department of Veterans Affairs

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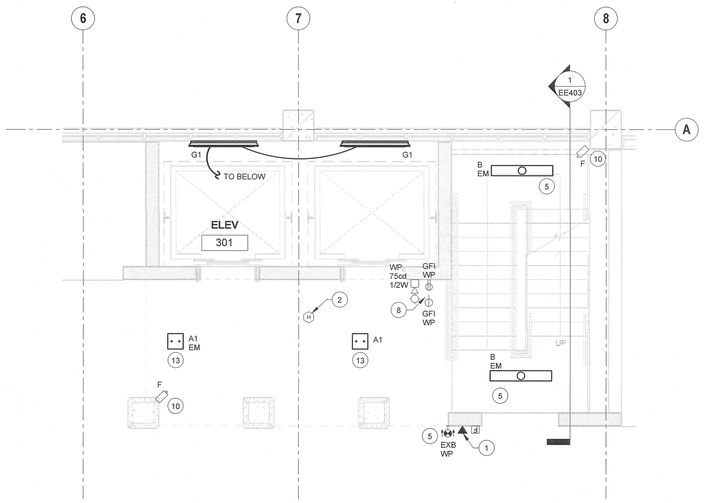
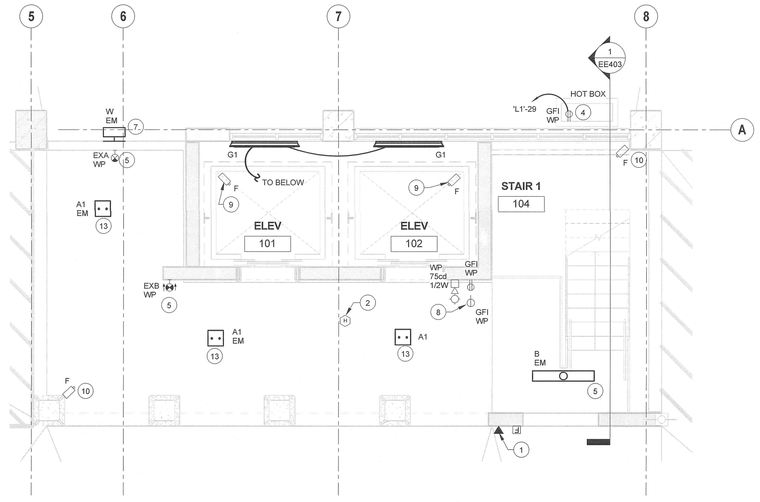
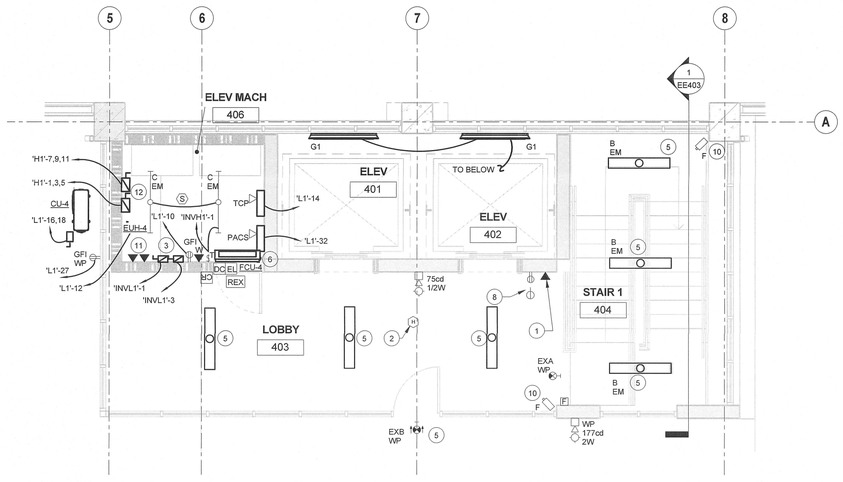


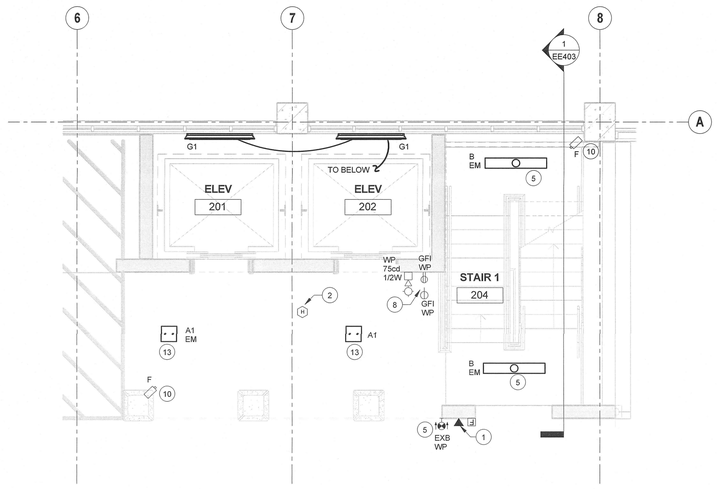
3 EE402 LEVEL 3 STAIR 1 ELECTRICAL ENLARGEMENT
1/4" = 1'-0"



1 EE402 LEVEL 1 STAIR 1 ELECTRICAL ENLARGEMENT
1/4" = 1'-0"



4 EE402 LEVEL 4 STAIR 1 ELECTRICAL ENLARGEMENT
1/4" = 1'-0"



2 EE402 LEVEL 2 STAIR 1 ELECTRICAL ENLARGEMENT
1/4" = 1'-0"

GENERAL NOTES:

A. ALL LIGHTING CONDUCTORS SHALL BE 2-12 AWG, 1-12 AWG EG, IN 3/4" CONDUIT, UNLESS NOTED OTHERWISE.

B. ALL RECEPTACLE CONDUCTORS SHALL BE 2-12 AWG, 1-12 AWG EG, IN 3/4" CONDUIT, UNLESS NOTED OTHERWISE.

C. VERIFY LOCATION AND ELECTRICAL REQUIRMENTS OF ALL MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR.

D. SEE SHEET EE601 FOR EQUIPMENT CONDUCTOR SCHEDULE.

E. ALL EXTERIOR WALL MOUNTED LIGHTING SHALL BE MOUNTED DIRECTLY TO SPANDRELS. BOXES AND CONDUIT SHALL NOT BE INSTALLED ON OUTSIDE SURFACE OF GARAGE. CONDUCTORS ARE TO BE ROUTED DIRECTLY THROUGH SPANDREL TO JUNCTION BOX MOUNTED ON THE INSIDE SURFACE OF SPANDREL.

SHEET KEY NOTES:

1 PROVIDE EMERGENCY TELEPHONE CALL BOX WITH BLUE LIGHT. PROVIDE 2-4PR UTP CABLE IN 3/4" CONDUIT TO DATA RACK IN IT ROOM (USE FIBER FOR RUNS GREATER THAN 295'). TERMINATION BY VA. STAIR 1 EMERGENCY PHONES SHALL BE CIRCUITED FROM 'INVL1'-5

2 INSTALL WITHIN 21" OF THE CENTERLINE OF EACH ELEVATOR DOOR.

3 PROVIDE 1P-30A FUSED DISCONNECT, FUSED AT 20A FOR EACH ELEVATOR CAB. COORDINATE LOCATION WITH ELEVATOR INSTALLER.

4 PROVIDE GFI, WEATHERPROOF RECEPTACLE INSIDE HOT BOX FOR HOT BOX POWER.

5 ALL STAIR 1 AND LEVEL 4 ELEVATOR LOBBY LIGHTING AND EXIT SIGNS SHALL BE CIRCUITED FROM 'INVH1'-3.

6 FAN COIL UNIT (FCU) POWERED FROM OUTDOOR CONDENSING UNIT (CU).

7 CIRCUIT WITH TYPE A (EM) FIXTURES ON LEVEL 1.

8 CIRCUIT STAIR 1 RECEPTACLES FROM 'L1'-27. PROVIDE SIMPLEX RECEPTACLE AT 8' AFF FOR FIRE EXTINGUISHER MONITORING WIRELESS REPEATER. COORDINATE WITH FIRE EXTINGUISHER MONITORING PROVIDER.

9 ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL CEILING MOUNTED FIXED DOME IP CAMERA IN EACH ELEVATOR CAB. VERIFY AND COORDINATE WITH ELEVATOR INSTALLER. COORDINATE CAMERA ANGLES WITH OWNER.

10 COORDINATE EXACT LOCATION OF CAMERA WITH SECURITY DEPARTMENT PRIOR TO ROUGH-IN.

11 PROVIDE 4 PR UTP IN 3/4" CONDUIT TO TTB IN IT ROOM FOR EACH ELEVATOR CAB. VERIFY AND COORDINATE LOCATION WITH ELEVATOR INSTALLER.

12 PROVIDE 3P-100A FUSED DISCONNECT FOR EACH ELEVATOR. FUSE PER ELEVATOR NAMEPLATE. COORDINATE WITH ELEVATOR INSTALLER.

13 CIRCUIT TYPE A AND TYPE A (EM) FIXTURE WITH OTHER TYPE A AND TYPE A (EM) FIXTURES ON SAME LEVEL.

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION Apogee Consulting Group, P.A. C02379

Revisions:	Date

VA U.S. Department of Veterans Affairs
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CONSTRUCTION DOCUMENTS

Drawing Title: ELECTRICAL ENLARGEMENTS	Project Title: CONSTRUCT PARKING GARAGE	A/E Project Number: 15.1003	OFFICE OF FACILITIES MANAGEMENT
		Building Number: BLDG 108	
Approved for Design Concept: FACILITY MANAGEMENT DIVISION MANAGER	Location: COLUMBIA, SC VAMC	Drawing Number: EE402	VA Project Number: 544-306
	Date: 4 DEC 2015 / Checked By: JKM / Drawn By: SCB		VA U.S. Department of Veterans Affairs

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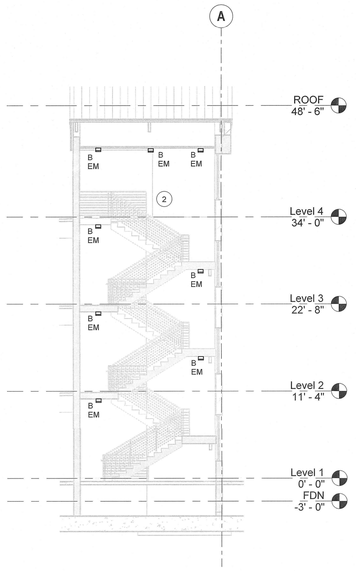
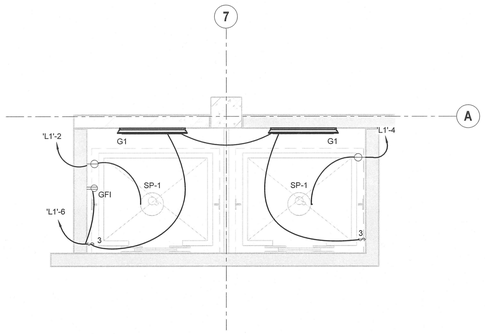
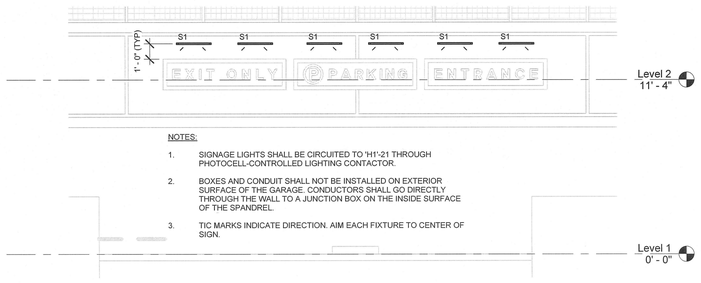


1 EE403 STAIR 1 ELECTRICAL SECTION
1/8" = 1'-0"



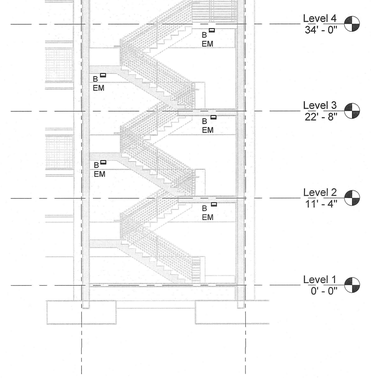
3 EE403 ELEVATOR PIT ELECTRICAL ENLARGEMENT
1/4" = 1'-0"



NOTES:

1. SIGNAGE LIGHTS SHALL BE CIRCUITED TO 'H1'-21 THROUGH PHOTOCELL-CONTROLLED LIGHTING CONTACTOR.
2. BOXES AND CONDUIT SHALL NOT BE INSTALLED ON EXTERIOR SURFACE OF THE GARAGE. CONDUCTORS SHALL GO DIRECTLY THROUGH THE WALL TO A JUNCTION BOX ON THE INSIDE SURFACE OF THE SPANDREL.
3. TIC MARKS INDICATE DIRECTION. AIM EACH FIXTURE TO CENTER OF SIGN.

4 EE403 SIGNAGE ELEVATION
1/4" = 1'-0"



2 EE403 STAIR 2 ELECTRICAL SECTION
1/8" = 1'-0"

GENERAL NOTES:

A. ALL LIGHTING CONDUCTORS SHALL BE 2-12 AWG, 1-12 AWG EG, IN 3/4" CONDUIT, UNLESS NOTED OTHERWISE.

B. ALL RECEPTACLE CONDUCTORS SHALL BE 2-12 AWG, 1-12 AWG EG, IN 3/4" CONDUIT, UNLESS NOTED OTHERWISE.

C. VERIFY LOCATION AND ELECTRICAL REQUIRMENTS OF ALL MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR.

D. SEE SHEET EE601 FOR EQUIPMENT CONDUCTOR SCHEDULE.

E. ALL EXTERIOR WALL MOUNTED LIGHTING SHALL BE MOUNTED DIRECTLY TO SPANDRELS. BOXES AND CONDUIT SHALL NOT BE INSTALLED ON OUTSIDE SURFACE OF GARAGE. CONDUCTORS ARE TO BE ROUTED DIRECTLY THROUGH SPANDREL TO JUNCTION BOX MOUNTED ON THE INSIDE SURFACE OF SPANDREL.

(#) SHEET KEY NOTES:

1 ALL STAIR 2 LIGHTING AND EXIT SIGNS SHALL BE CIRCUITED FROM 'INVH1'-5.

2 ALL STAIR 1 AND LEVEL 4 ELEVATOR LOBBY LIGHTING AND EXIT SIGNS SHALL BE CIRCUITED FROM 'INVH1'-3.

SOUTH CAROLINA
Apogee Consulting Group, P.A.
C02379
CERTIFICATE OF AUTHORIZATION

Revisions:	Date

VA | U.S. Department of Veterans Affairs

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CONSTRUCTION DOCUMENTS

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		Building Number: BLDG 108	
Approved for Design Concept: FACILITY MANAGEMENT DIVISION MANAGER	Location: COLUMBIA, SC VAMC	Drawing Number: EE403	VA Project Number: 544-306
	Date: 4 DEC 2015 / Checked By: JKM / Drawn By: SCB		VA | U.S. Department of Veterans Affairs

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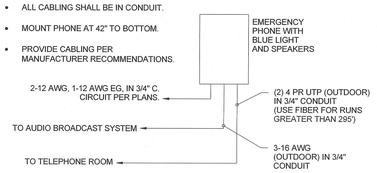
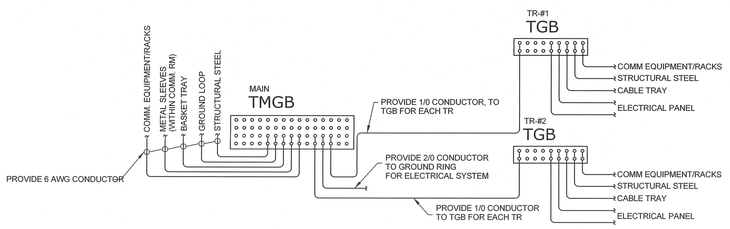
NOTES:

- ALL CABLING SHALL BE IN CONDUIT.
- MOUNT PHONE AT 42" TO BOTTOM.
- PROVIDE CABLING PER MANUFACTURER RECOMMENDATIONS.



10 EE501 WIDE AREA EMERGENCY BROADCAST SYSTEM
NTS

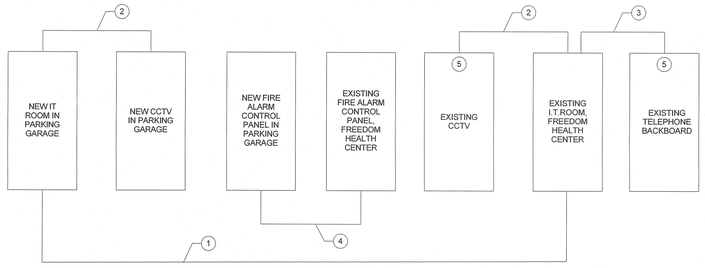
NOTES:
1. ALL CONNECTIONS TO THE TMGB AND TGB SHALL BE MADE WITH COMPRESSION STYLE LONG BARREL CONNECTORS ON THE CONDUCTOR AND 2- LUG BOLTED CONNECTIONS TO THE GROUNDING BARS. CONNECTIONS TO STEEL SHALL BE WITH SILICON BRONZE HARDWARE. CONNECTION TO SLEEVES OR CONDUITS SHALL BY AN APPROVED GROUNDING BUSHING.
2. LOCATE TMGB AND TGB ON THE LEFT OF THE TTB AND 16" AFF
3. ALL CONDUCTORS USED FOR GROUNDING SHALL BE MARKED AT CONNECTION POINT AND EVERY 10' THEREAFTER WITH A LABEL IDENTIFYING IT AS THE TELECOMMUNICATION GROUNDING BACKBONE (TBB) USE PANDUIT #LTYK OR EQUAL.
4. PROVIDE 4"H x 20"L x 1/4"W TMGB.
5. PROVIDE 2" H x 24"L x 1/4"W TGB
6. CONTRACTOR SHALL CLEAN THE BUS BAR AND APPLY ANTIOXIDANT PRIOR TO FASTENING THE CONNECTORS TO THE BUS BAR.



9 EE501 TELECOM GROUNDING DETAIL
N.T.S.

PARTIAL LAN NETWORK RISER NOTES :

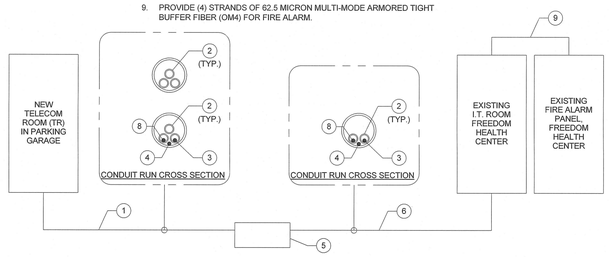
1. PROVIDE 12 STRAND 62.5 MICRON MULTI-MODE ARMORED TIGHT BUFFERED FIBER (OM4) AND 25 PR OUTDOOR UTP CABLE (CAT5E) WITH S.E.P. AT EACH END. SEE SHEET EE102 FOR ROUTING. VERIFY HOSPITAL LOCATION WITH COR.
2. PROVIDE 6 STRAND 62.5 MICRON MULTI-MODE FIBER (OM4). VERIFY WITH COR.
3. PROVIDE 25 PR INDOOR UTP CABLE (CAT5E).
4. PROVIDE 4 STRAND 62.5 MICRON MULTI-MODE ARMORED TIGHT BUFFER FIBER (OM4) FOR FIRE ALARM SYSTEM. SEE SHEET EE102 FOR ROUTING. VERIFY WITH COR.
5. PROVIDE COPPER AND FIBER PATCH PANELS FOR EACH SYSTEM.



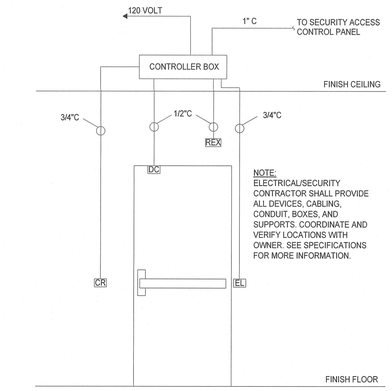
8 EE501 PARTIAL LAN NETWORK RISER DIAGRAM
N.T.S.

PARTIAL TELECOM RISER NOTES :

1. PROVIDE (2) 4" CONDUITS.
2. PROVIDE 1" INNER DUCTS OR MAXCELL.
3. PROVIDE (12) STRANDS OF OUTDOOR ARMORED MULTI-MODE 62.5 MICRON FIBER (OM4) FOR IT, DATA, AND SECURITY. SEE SHEET EE102 FOR ROUTING. VERIFY WITH COR.
4. PROVIDE (25) PAIR OUTDOOR CAT5 MULTI- MODE TELEPHONE CABLE WITH SERVICE ENTRANCE PROTECTION AT BOTH ENDS. SEE SHEET EE102 FOR ROUTING. VERIFY WITH COR.
5. PROVIDE 30" x 48" x 48"D PULL BOX WITH 'SIGNAL' LABEL ON THE LID. TIER 15 LOADING.
6. PROVIDE (1) 3" CONDUIT BY DIRECTIONAL BORE PER SITE PLAN, ROUTE VERIFIED BY GROUND PENETRATING RADAR.
7. INSTALL TRACER WIRE IN EACH UNDERGROUND CONDUIT.
8. PROVIDE (4) STRANDS OF OUTDOOR ARMORED 62.5 MICRON MULTI-MODE FIBER (OM4) FOR FIRE ALARM SYSTEM.
9. PROVIDE (4) STRANDS OF 62.5 MICRON MULTI-MODE ARMORED TIGHT BUFFER FIBER (OM4) FOR FIRE ALARM.

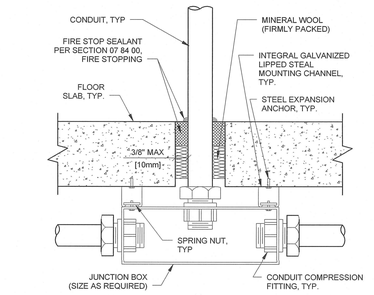


7 EE501 PARTIAL TELECOM RISER DIAGRAM
N.T.S.

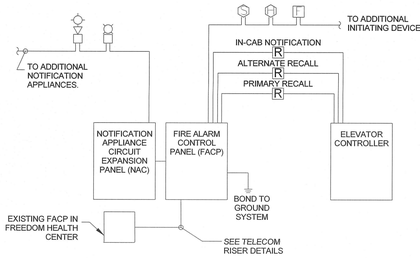


NOTE:
ELECTRICAL/SECURITY CONTRACTOR SHALL PROVIDE ALL DEVICES, CABLING, CONDUIT, BOXES, AND SUPPORTS. COORDINATE AND VERIFY LOCATIONS WITH OWNER. SEE SPECIFICATIONS FOR MORE INFORMATION.

6 EE501 DOOR CARD READER ACCESS DETAIL
N.T.S.



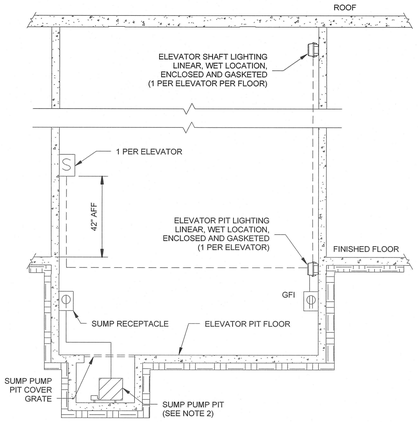
5 EE501 FLOOR SLAB PENETRATION DETAIL
N.T.S.



FIRE ALARM NOTES:

1. FIRE ALARM SYSTEM SHALL BE INTERCONNECTED WITH ACCESS CONTROL SYSTEM TO ALLOW EGRESS DURING ALARM CONDITIONS. COORDINATE BETWEEN ACCESS CONTROL SYSTEM AND FIRE ALARM SYSTEM MANUFACTURERS.
2. ALL FIRE ALARM WIRING SHALL BE IN EMT, FACTORY-PAINTED RED.
3. ALL WIRING SHALL BE AS RECOMMENDED BY MANUFACTURER.
4. PROVIDE POWER SUPPLY AND/OR NAC PANEL AS REQUIRED FOR DEVICES.
5. PROVIDE POWER AMPLIFIERS FOR ALL SPEAKERS.
6. SYSTEM SHALL MATCH FACILITY EXISTING NOTIFIER SYSTEM.
7. FIRE ALARM SHALL INITIATE ELEVATOR RECALL UPON ALARM CONDITION IN ANY ELEVATOR LOBBY OR MACHINE ROOM AS DESCRIBED IN NFPA 72 AND ASME A17.1.
8. SPEAKERS SHALL BE WIRED SEPARATELY FROM STROBES.

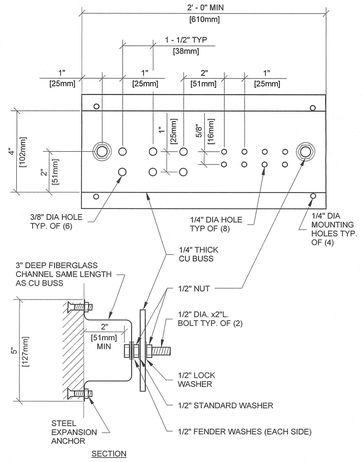
4 EE501 FIRE ALARM SYSTEM RISER DIAGRAM
N.T.S.



NOTES:

1. IN CASE OF A FIRE ALARM THE ELEVATORS PRIMARY RECALL SHALL BE THE GROUND LEVEL AND THE SECONDARY RECALL SHALL BE THE SECOND LEVEL.
2. SEE ARCHITECTURAL PLANS FOR EXACT FLOOR NAMES AND ADDITIONAL HOISTWAY AND PIT INFORMATION.

3 EE501 ELEVATOR PIT DETAIL
N.T.S.

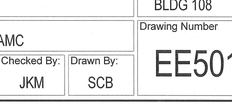


SECTION

GENERAL NOTES:
1. ALL HARDWARE SHOWN SHALL BE STAINLESS STEEL.
2. PROVIDE 1 MOUNTING POINT PER 12" OF BAR LENGTH.
3. HOLES MAY BE ADDED IF REQUIRED.

2 EE501 PARKING GARAGE ELECTRICAL ROOM GROUNDING BAR DETAIL
N.T.S.

System No. C-AJ-1001
June 15, 2005
F Rating - 3 Hr
T Rating - 0 Hr
W Rating - Class I (See Item 4)



1. Floor or Wall Assembly – Min 4-1/2 in. (114 mm) thick lightweight or normal weight (100-150 pcf or 1600-2400 kg/m3) concrete. Wall may also be constructed of any UL Classified **Concrete Blocks*** . Max diam of circular through opening is 32-1/2 in. (826 mm).

See **Concrete Blocks** (CAZT) category in the Fire Resistance Directory for names of manufacturers.

1A. Steel Sleeve (Optional, not shown) – Nom 12 in. (305 mm) diam (or smaller) Schedule 40 (or heavier) steel pipe sleeve cast into concrete floor or wall. Sleeve to be flush with or project max 2 in. (51mm) from top surface of floor or from both surfaces of wall.

2. Through Penetrant – One metallic pipe, conduit or tubing installed either concentrically or eccentrically within the firestop system. The annular space between pipe, conduit or tubing and periphery of opening shall be min of 0 in. (0 mm)(point contact) to max 1-3/8 in. (35 mm). Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:

A. Steel Pipe – Nom 30 in. (762 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
A1. Iron Pipe – Nom 30 in. (762 mm) diam (or smaller) cast or ductile iron pipe.
B. Conduit – Nom 6 in. (152 mm) diam (or smaller) rigid steel conduit.
C. Conduit – Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing.

3. Packing Material – Polyethylene backer rod or nom 1 in. (25 mm) thickness of tightly-packed ceramic (alumina silica) fiber blanket, mineral wool batt or glass fiber insulation material used as a permanent form. Packing material to be recessed from top surface of floor or from both surfaces of solid concrete or concrete block wall as required to accommodate the required thickness of caulk fill material (Item 4). As an alternate when max pipe size is 10 in. (254 mm) diam and when max annular space is 1 in. (25 mm), a min 1 in. (25 mm) thickness of tightly-packed ceramic fiber blanket or mineral wool batt packing material may be recessed min 1/2 in. (13 mm) from bottom surface of floor or from either side of solid concrete wall.

4. Fill, Void or Cavity Materials* - Caulk or Sealant – Applied to fill the annular space to the min thickness shown in the following table:

Max Pipe Diam in. (mm)	Max Annular Space in. (mm)	Packing Matl Type (a)	Min Caulk Thkns in. (mm)
10 (254)	1 (25)	BR, CF, GF or MW	1/2 (13) (b)
10 (254)	1 (25)	CF or MW	1/2 (13) (c)
30 (762)	2-1/2 (64)	BR, CF, GF or MW	1 (25) (b)

(a) BR = Polyethylene backer rod.
CF = Ceramic fiber blanket.
GF = Glass fiber insulation.
MW = Mineral-wool batt.
(b) Caulk installed flush with top surface of floor or both surfaces of wall.
(c) Caulk installed flush with bottom surface of floor or one surface of solid (non-concrete block) wall.

3M COMPANY – CP 25WB+ caulk or FB-3000 WT sealant.
(Note: W Rating applies only when FB-3000 WT sealant is used.)

*Bearing the UL Classification Marking

1 EE501 CONDUIT PENETRATION THROUGH CONCRETE BLOCK ASSEMBLY (UL #C-AJ-1001)
N.T.S.

SOUTH CAROLINA Apogee Consulting Group, P.A. C02379 CERTIFICATE OF AUTHORIZATION

Revisions:	Date

VA | U.S. Department of Veterans Affairs

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CONSTRUCTION DOCUMENTS

Drawing Title: ELECTRICAL DETAILS	Project Title: CONSTRUCT PARKING GARAGE	A/E Project Number: 15.1003	OFFICE OF FACILITIES MANAGEMENT
		Building Number: BLDG 108	
Approved for Design Concept: FACILITY MANAGEMENT DIVISION MANAGER	Location: COLUMBIA, SC VAMC	Drawing Number: EE501	VA Project Number: 544-306
	Date: 4 DEC 2015 / Checked By: JKM / Drawn By: SCB		VA U.S. Department of Veterans Affairs

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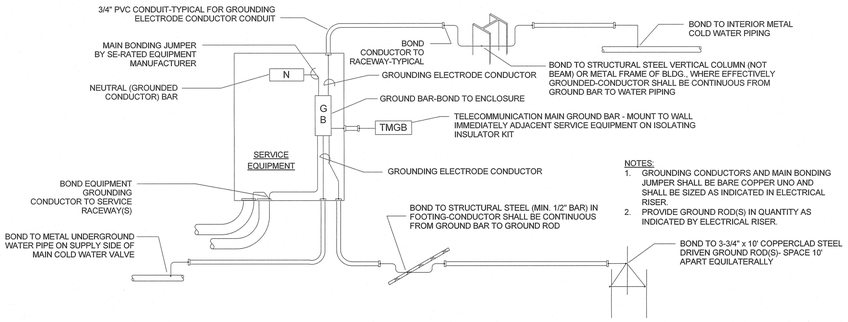
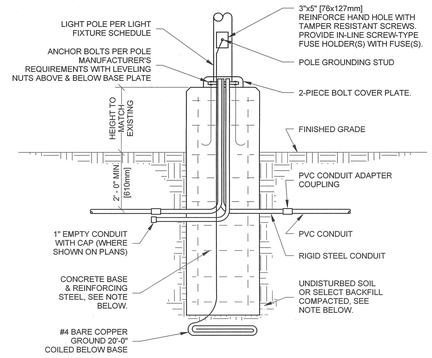


NOTES:
1. GROUNDING CONDUCTORS AND MAIN BONDING JUMPER SHALL BE BARE COPPER UNO AND SHALL BE SIZED AS INDICATED IN ELECTRICAL RISER.
2. PROVIDE GROUND ROD(S) IN QUANTITY AS INDICATED BY ELECTRICAL RISER.

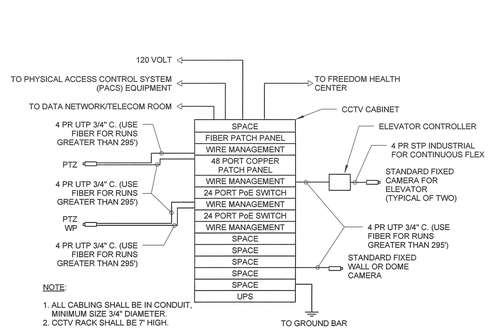
7 EE502 SERVICE GROUNDING DETAIL
NTS



GENERAL NOTES:

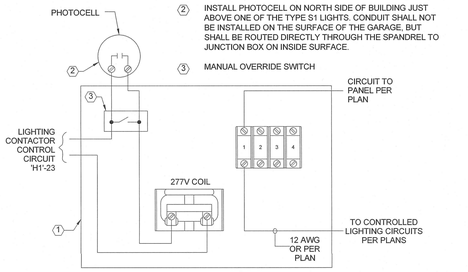
1. BACKFILL, CONCRETE, REINFORCING STEEL, AND ANCHOR BOLTS ARE SHOWN FOR REFERENCE ONLY. STRUCTURAL DESIGN IS SHOWN ON STRUCTURAL DRAWINGS.
2. REFER TO SPECIFICATION SECTION 26 56 00 FOR MOUNTING AND LEVELING REQUIREMENTS.

9 EE502 POLE BASE DETAIL
N.T.S.



NOTE:
1. ALL CABLING SHALL BE IN CONDUIT, MINIMUM SIZE 3/4" DIAMETER.
2. CCTV RACK SHALL BE 7' HIGH.

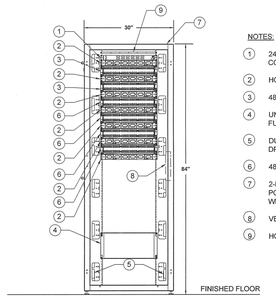
6 EE502 CCTV SYSTEM RISER DIAGRAM
N.T.S.



LIGHTING CONTACTOR/CONTROL NOTES:

1. ELECTRICALLY HELD 4-POLE LIGHTING CONTACTOR WITH 30 AMP CONTACTS AND NEMA 1 ENCLOSURE. INSTALL IN ELECTRICAL ROOM. PROVIDE A PHENOLIC LABEL DESCRIBING CIRCUITS SERVED.
2. INSTALL PHOTOCELL ON NORTH SIDE OF BUILDING JUST ABOVE ONE OF THE TYPE S1 LIGHTS. CONDUIT SHALL NOT BE INSTALLED ON THE SURFACE OF THE GARAGE, BUT SHALL BE ROUTED DIRECTLY THROUGH THE SPANDREL TO JUNCTION BOX ON INSIDE SURFACE.
3. MANUAL OVERRIDE SWITCH

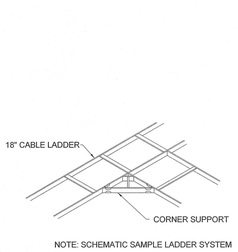
8 EE502 LIGHTING CONTACTOR DETAIL
NTS



NOTES:

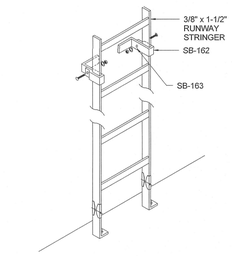
1. 24 PORT FIBER OPTIC PATCH PANEL WITH COUPLERS.
2. HORIZONTAL WIRE MANAGEMENT
3. 48 PORT COPPER PATCH PANEL, VOICE
4. UNINTERRUPTIBLE POWER SUPPLY, VA FURNISH VA INSTALL
5. DUPLEX RECEPTACLE, SEE ELECTRICAL DRAWINGS
6. 48 PORT COPPER PATCH PANEL, DATA
7. 2-POST RACK, 19 OR 23 INCH WIDE WITH POWER STRIP, HORIZONTAL AND VERITCAL WIRE MANAGEMENT, GROUND BUS, ETC.
8. VERTICAL POWER STRIP.
9. HORIZONTAL GROUND BUS.

5 EE502 DATA RACK DETAIL - TYPICAL
N.T.S.

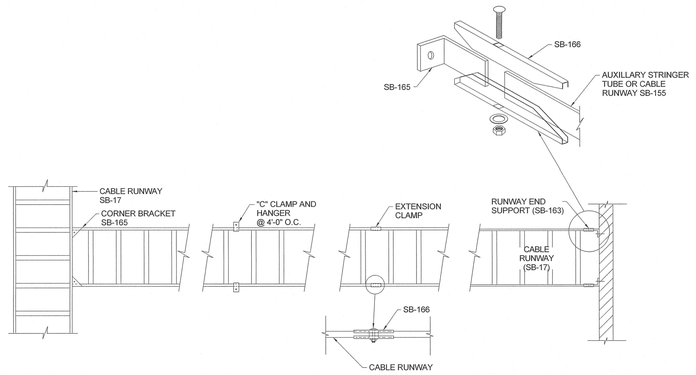


NOTE: SCHEMATIC SAMPLE LADDER SYSTEM

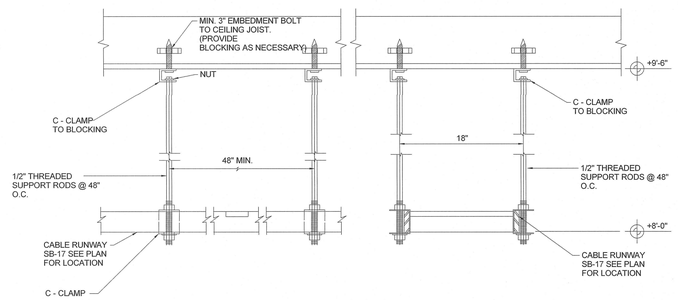
4 EE502 TYPICAL CABLE LADDER DETAIL
N.T.S.



3 EE502 VERTICAL LADDER DETAIL
N.T.S.



2 EE502 CABLE LADDER DETAIL - PLAN VIEW
N.T.S.



1 EE502 CABLE LADDER DETAIL - ELEVATION
N.T.S.

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION
Apogee Consulting Group, P.A.
C02379

Revisions:	Date

VA U.S. Department of Veterans Affairs
WILLIAM JENNINGS BRYAN DORN VAMC, COLUMBIA, SC
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CONSTRUCTION DOCUMENTS

Drawing Title: ELECTRICAL DETAILS	Project Title: CONSTRUCT PARKING GARAGE	A/E Project Number: 15.1003	OFFICE OF FACILITIES MANAGEMENT
		Building Number: BLDG 108	
Approved for Design Concept: FACILITY MANAGEMENT DIVISION MANAGER	Location: COLUMBIA, SC VAMC	Drawing Number: EE502	VA Project Number: 544-306
	Date: 4 DEC 2015 / Checked By: JKM / Drawn By: SCB		VA U.S. Department of Veterans Affairs

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EQUIPMENT CONDUCTOR SCHEDULE

TAG	DESCRIPTION	VOLTS	PHASE	LOAD	MOCP	CONDUCTORS	NEUTRAL	GROUND	CONDUIT	DISCONNECT TYPE
--	ELEVATOR 1	480	3	60 A	3P-100	3 3 AWG	--	8 AWG	1-1/4"	100A NEMA 1 FUSIBLE
--	ELEVATOR 1 CAB*	120	1	16 A	1P-20	1 10 AWG	10 AWG	10 AWG	3/4"	30A NEMA 1 FUSIBLE
--	ELEVATOR 2	480	3	60 A	3P-100	3 3 AWG	--	8 AWG	1-1/4"	100A NEMA 1 FUSIBLE
--	ELEVATOR 2 CAB*	120	1	16 A	1P-20	1 10 AWG	10 AWG	10 AWG	3/4"	30A NEMA 1 FUSIBLE
CU-1	CONDENSING UNIT	208	1	13 MCA	2P-15	2 12 AWG	--	12 AWG	3/4"	30A NEMA 3R FUSIBLE
FCU-1	FAN COIL UNIT	208	1	--	--	2 12 AWG	--	12 AWG	3/4"	--
CU-2	CONDENSING UNIT	208	1	13 MCA	2P-15	2 12 AWG	--	12 AWG	3/4"	30A NEMA 3R FUSIBLE
FCU-2	FAN COIL UNIT	208	1	--	--	2 12 AWG	--	12 AWG	3/4"	--
CU-3	CONDENSING UNIT	208	1	13 MCA	2P-15	2 12 AWG	--	12 AWG	3/4"	30A NEMA 3R FUSIBLE
FCU-3	FAN COIL UNIT	208	1	--	--	2 12 AWG	--	12 AWG	3/4"	--
CU-4	CONDENSING UNIT*	208	1	13 MCA	2P-15	2 10 AWG	--	10 AWG	3/4"	30A NEMA 3R FUSIBLE
FCU-4	FAN COIL UNIT	120	1	--	--	2 12 AWG	--	12 AWG	3/4"	--
EUH-1	ELECTRIC UNIT HEATER	120	1	4.2 A	1P-20	1 12 AWG	12 AWG	12 AWG	3/4"	MOTOR-RATED SWITCH
EUH-2	ELECTRIC UNIT HEATER	120	1	4.2 A	1P-20	1 12 AWG	12 AWG	12 AWG	3/4"	MOTOR-RATED SWITCH
EUH-3	ELECTRIC UNIT HEATER	120	1	4.2 A	1P-20	1 12 AWG	12 AWG	12 AWG	3/4"	MOTOR-RATED SWITCH
EUH-4	ELECTRIC UNIT HEATER*	120	1	4.2 A	1P-20	1 10 AWG	10 AWG	10 AWG	3/4"	MOTOR-RATED SWITCH
EF-1	EXHAUST FAN	120	1	128 W	1P-20	1 12 AWG	12 AWG	12 AWG	3/4"	MOTOR-RATED SWITCH
EF-2	EXHAUST FAN	120	1	55 W	1P-20	1 12 AWG	12 AWG	12 AWG	3/4"	MOTOR-RATED SWITCH
SP-1	SUMP PUMP	120	1	4/10 HP	1P-20	1 12 AWG	12 AWG	12 AWG	3/4"	SIMPLEX
SP-1	SUMP PUMP	120	1	4/10 HP	1P-20	1 12 AWG	12 AWG	12 AWG	3/4"	SIMPLEX

THE ELECTRICAL CONTRACTOR SHALL VERIFY AND COORDINATE POWER REQUIREMENTS OF THE EQUIPMENT PROVIDED WITH THE MANUFACTURER/ CONTRACTOR AND SHALL PROVIDE ELECTRICAL SERVICES, FEEDERS, ETC. TO MATCH THE FURNISHED EQUIPMENT. CONTRACTOR SHALL PROVIDE FEEDERS/ CONDUCTORS SIZED TO ACCOUNT FOR VOLTAGE DROP IN ACCORDANCE WITH NEC 210.19.
* CONDUCTORS INCREASED DUE TO VOLTAGE DROP

PANEL 'H1'

LOAD SERVED	KVA/Phase A	B	C	CKT BRKR	CKT NO	NEUTRAL A B C	CKT NO	CKT BRKR	KVA/Phase A	B	C	LOAD SERVED
ELEVATOR #1	16.63	---	---	3P-100	1		2	3P-200	8.46	---	---	XFMR 'T1' TO PANEL 'L1'
	---	16.63	---		3		4		---	9.17	---	
	---	---	16.63		5		6		---	---	7.42	
ELEVATOR #2	16.63	---	---	3P-100	7		8	3P-60	0.00	---	---	SPD
	---	16.63	---		9		10		---	0.00	---	
	---	---	16.63		11		12		---	---	0.00	
EMERGENCY LIGHTING INVERTER PANEL 'INVH1'	6.39	---	---	3P-30	13		14	1P-20	1.38	---	---	LEVEL 1 GARAGE LIGHTING
	---	4.61	---		15		16	1P-20	---	1.75	---	LEVEL 2 GARAGE LIGHTING
	---	---	1.44		17		18	1P-20	---	---	1.33	LEVEL 3 GARAGE LIGHTING
EXTERIOR WALL MTD LTG	0.45	---	---	1P-20	19		20	1P-20	0.81	---	---	LEVEL 4 GARAGE LIGHTING
SIGNAGE	---	0.20	---	1P-20	21		22	1P-20	---	0.00	---	SPARE
LIGHTING CONTACTOR	---	---	0.01	1P-20	23		24	1P-20	---	---	0.00	SPARE
SPARE	0.00	---	---	1P-20	25		26	1P-20	0.00	---	---	SPARE
SPARE	---	0.00	---	1P-20	27		28	1P-20	---	0.00	---	SPARE
SPARE	---	---	0.00	1P-20	29		30	1P-20	---	---	0.00	SPARE
SPARE	0.00	---	---	1P-20	31		32	1P-20	0.00	---	---	SPARE
SPARE	---	0.00	---	1P-20	33		34	1P-20	---	0.00	---	SPARE
SPARE	---	---	0.00	1P-20	35		36	1P-20	---	---	0.00	SPARE
SPARE	0.00	---	---	1P-20	37		38	1P-20	0.00	---	---	SPARE
SPARE	---	0.00	---	1P-20	39		40	1P-20	---	0.00	---	SPARE
SPARE	---	---	0.00	1P-20	41		42	1P-20	---	---	0.00	SPARE
SUB TOTAL	40.10	38.07	34.71						10.65	10.92	8.75	SUB TOTAL
									50.75	48.99	43.47	TOTAL

C/B TEMP. 75 C. RATING 277 480 V 3 PH 4 WIRE
MOUNTING SURFACE
ISOLATED GROUND BUS ( ) YES (X) NO
MAIN CIRCUIT BREAKER (X) YES ( ) NO
SERVICE ENTR. RATED (X) YES ( ) NO
MINIMUM AIC (K AMPS) 18
MCB RATING 400A
BUS RATING 400A
NEUTRAL RATING 100%

LOAD TYPE		CONNECTED KVA A	B	C	NEC DEM FACTOR	DEMAND KVA A	B	C
GENERAL LIGHTING		6.58	5.17	2.93	125%	8.23	6.47	3.66
GENERAL USE RECEPT		2.34	2.52	1.44	<=10 KVA@100%	2.34	2.52	1.44
					>10KVA@50%	0.00	0.00	0.00
MOTORS AND EQUIPMENT	LARGEST	16.63	16.63	16.63	125%	20.79	20.79	20.79
	ALL OTHERS	20.30	21.58	20.68	100%	20.30	21.58	20.68
DEDICATED RECEPT		4.39	2.59	1.94	100%	4.39	2.59	1.94
FIX. ELEC. SPACE HEAT		0.50	0.50	1.01	125%	0.50	0.50	1.01
TOTAL KVA PER PHASE		50.75	48.99	44.63		56.55	54.44	49.52
TOTAL DEMAND AMPERES PER PHASE						204	197	179
PANEL / FEEDER (TOTAL KVA)								160.51
(TOTAL KVA) X 1000 / VOLTS X 1.732 = TOTAL AMPS								193

PANEL 'H1'

PANEL 'L1'

LOAD SERVED	KVA/Phase A	B	C	CKT BRKR	CKT NO	NEUTRAL A B C	CKT NO	CKT BRKR	KVA/Phase A	B	C	LOAD SERVED
RECEPT ELEC 106	0.54	---	---	1P-20	1		2	1P-20	0.84	---	---	ELEVATOR 1 SUMP PUMP
RECEPT IT 107	---	0.90	---	1P-20	3		4	1P-20	---	0.84	---	ELEVATOR 2 SUMP PUMP
RECEPT SECURITY 108	---	---	0.72	1P-20	5		6	1P-20	---	---	0.60	ELEV. PIT & SHAFT LTS & RECEPT
RECEPT STORAGE 109	0.90	---	---	1P-20	7		8	1P-20	0.00	---	---	SPARE
RECEPT IT RACK 107	---	1.20	---	1P-20	9		10	1P-20	---	0.18	---	RECEPTS ELEV MACH RM 406
SPARE	---	---	0.00	1P-20	11		12	1P-20	---	---	0.50	EUH-4 ELEV. MACH RM 406
RECEPT CCTV RACK 108	1.20	---	---	1P-20	13		14	1P-20	0.25	---	---	TCP ELEV MACH RM 406
SPARE	---	0.00	---	1P-20	15		16	2P-15	---	1.35	---	CU-4 & FCU-4
RECEPT COMM BOARD IT 107	---	---	0.18	1P-20	17		18		---	---	1.35	
RECEPT COMM BOARD IT 107	0.18	---	---	1P-20	19		20	2P-15	1.35	---	---	CU-1 & FCU-1
RECEPT COMM BOARD SEC 108	---	0.18	---	1P-20	21		22		---	1.35	---	
RECEPT COMM BOARD SEC 108	---	---	0.18	1P-20	23		24	2P-15	---	---	1.35	CU-2 & FCU-2
RECEPT STAIR 2 (LVL 1-4)	0.72	---	---	1P-20	25		26		1.35	---	---	
RECEPT STAIR 1 (LVL 1-4)	---	1.26	---	1P-20	27		28	2P-15	---	1.35	---	CU-3 & FCU-3
RECEPT HOT BOX	---	---	0.18	1P-20	29		30		---	---	1.35	
EF-1 STORAGE	0.13	---	---	1P-20	31		32	1P-20	0.25	---	---	PACS ELEV MACH RM 406
EF-2 ELEC. RM	---	0.06	---	1P-20	33		34	1P-20	---	0.50	---	EUH-1 ELEC. RM
SPARE	---	---	0.00	1P-20	35		36	1P-20	---	---	0.50	EUH-2 IT RM
TCP ELEC 106	0.25	---	---	1P-20	37		38	1P-20	0.50	---	---	EUH-3 SECURITY RM
SPARE	---	0.00	---	1P-20	39		40	1P-20	---	0.00	---	SPARE
FIRE EXTINGUISHER MONITORING	---	---	0.50	1P-20	41		42	1P-20	---	---	0.00	SPARE
SPARE	0.00	---	---	1P-20	43		44	1P-20	0.00	---	---	SPARE
SPARE	---	0.00	---	1P-20	45		46	1P-20	---	0.00	---	SPARE
SPARE	---	---	0.00	1P-20	47		48	1P-20	---	---	0.00	SPARE
SPARE	0.00	---	---	1P-20	49		50	1P-20	0.00	---	---	SPARE
SPARE	---	0.00	---	1P-20	51		52	1P-20	---	0.00	---	SPARE
SPARE	---	---	0.00	1P-20	53		54	1P-20	---	---	0.00	SPARE
SPARE	0.00	---	---	1P-20	55		56	1P-20	0.00	---	---	SPARE
SPARE	---	0.00	---	1P-20	57		58	1P-20	---	0.00	---	SPARE
SPARE	---	---	0.00	1P-20	59		60	1P-20	---	---	0.00	SPARE
SPARE	0.00	---	---	1P-20	61		62	1P-20	0.00	---	---	SPARE
SPARE	---	0.00	---	1P-20	63		64	1P-20	---	0.00	---	SPARE
SPARE	---	---	0.00	1P-20	65		66	1P-20	---	---	0.00	SPARE
SPARE	0.00	---	---	1P-20	67		68	1P-20	0.00	---	---	SPARE
SPARE	---	0.00	---	1P-20	69		70	1P-20	---	0.00	---	SPARE
SPARE	---	---	0.00	1P-20	71		72	1P-20	---	---	0.00	SPARE
SPARE	0.00	---	---	1P-20	73		74	1P-20	0.00	---	---	SPARE
SPARE	---	0.00	---	1P-20	75		76	1P-20	---	0.00	---	SPARE
SPARE	---	---	0.00	1P-20	77		78	1P-20	---	---	0.00	SPARE
SPARE	0.00	---	---	1P-20	79		80	1P-20	0.00	---	---	SPARE
SPARE	---	0.00	---	1P-20	81		82	1P-20	---	0.00	---	SPARE
SPARE	---	---	0.00	1P-20	83		84	1P-20	---	---	0.00	SPARE
SUB TOTAL	3.92	3.60	1.76						4.54	5.57	5.66	SUB TOTAL
									8.46	9.17	7.42	TOTAL

C/B TEMP. 75 C. RATING 120 208 V 3 PH 4 WIRE
MOUNTING SURFACE
ISOLATED GROUND BUS ( ) YES (X) NO
MAIN CIRCUIT BREAKER (X) YES ( ) NO
SERVICE ENTR. RATED ( ) YES (X) NO
MINIMUM AIC (K AMPS) 10
MCB RATING 225A
BUS RATING 225A
NEUTRAL RATING 100%

LOAD TYPE		CONNECTED KVA A	B	C	NEC DEM FACTOR	DEMAND KVA A	B	C
GENERAL LIGHTING		0.00	0.00	0.42	125%	0.00	0.00	0.53
GENERAL USE RECEPT		2.34	2.52	1.44	<=10 KVA@100%	2.34	2.52	1.44
					>10KVA@50%	0.00	0.00	0.00
MOTORS AND EQUIPMENT	LARGEST	1.35	1.35	1.35	125%	1.69	1.69	1.69
	ALL OTHERS	2.32	3.60	2.70	100%	2.32	3.60	2.70
DEDICATED RECEPT		0.50	0.50	1.01	100%	1.95	1.20	0.50
FIX. ELEC. SPACE HEAT		0.50	0.50	1.01	125%	0.50	0.50	1.01
TOTAL KVA PER PHASE		8.46	9.17	7.42		8.80	9.51	7.86
TOTAL DEMAND AMPERES PER PHASE						73	79	66
PANEL / FEEDER (TOTAL KVA)								26.17
(TOTAL KVA) X 1000 / VOLTS X 1.732 = TOTAL AMPS								73

PANEL 'L1'

PANEL 'INVL1'

LOAD SERVED	KVA/Phase A	B	C	CKT BRKR	CKT NO	NEUTRAL A B C	CKT NO	CKT BRKR	KVA/Phase A	B	C	LOAD SERVED
ELEVATOR 1 CAB	1.00	---	---	1P-20	1		2	1P-20	0.90	---	---	FACP
ELEVATOR 2 CAB	---	1.00	---	1P-20	3		4	1P-20	---	0.90	---	NAC PANEL
EMERGENCY PHONES, STAIR 1	---	---	0.10	1P-20	5		6	1P-20	---	---	0.00	SPACE
EMERGENCY PHONES, STAIR 2	0.10	---	---	1P-20	7		8	1P-20	0.00	---	---	SPACE
EMERGENCY PHONES, STAIR 3	---	0.10	---	1P-20	9		10	1P-20	---	0.00	---	SPACE
CCTV RACK	---	---	1.20	1P-20	11		12	1P-20	---	---	0.00	SPARE
IT RACK	1.20	---	---	1P-20	13		14	1P-20	0.00	---	---	SPARE
PACS	---	0.25	---	1P-20	15		16	1P-20	---	0.00	---	SPARE
SPARE	---	---	0.00	1P-20	17		18	1P-20	---	---	0.00	SPARE
SPARE	0.00	---	---	1P-20	19		20	1P-20	0.00	---	---	SPARE
SPARE	---	0.00	---	1P-20	21		22	1P-20	---	0.00	---	SPARE
SPARE	---	---	0.00	1P-20	23		24	1P-20	---	---	0.00	SPARE
SPARE	0.00	---	---	1P-20	25		26	1P-20	0.00	---	---	SPARE
SPARE	---	0.00	---	1P-20	27		28	1P-20	---	0.00	---	SPARE
SPARE	---	---	0.00	1P-20	29		30	1P-20	---	---	0.00	SPARE
SUB TOTAL	2.30	1.35	1.30						0.90	0.90	0.00	SUB TOTAL
									3.20	2.25	1.30	TOTAL

C/B TEMP. 75 C. RATING 120 208 V 3 PH 4 WIRE
MOUNTING SURFACE
ISOLATED GROUND BUS ( ) YES (X) NO
MAIN CIRCUIT BREAKER (X) YES ( ) NO
SERVICE ENTR. RATED ( ) YES (X) NO
MINIMUM AIC (K AMPS) 10
MCB RATING 40A
BUS RATING 100A
NEUTRAL RATING 100%

LOAD TYPE		CONNECTED KVA A	B	C	NEC DEM FACTOR	DEMAND KVA A	B	C
GENERAL LIGHTING		1.00	1.00	0.00	125%	1.25	1.25	0.00
GENERAL USE RECEPT		0.00	0.00	0.00	<=10 KVA@100%	0.00	0.00	0.00
					>10KVA@50%	0.00	0.00	0.00
MOTORS AND EQUIPMENT	LARGEST	0.00	0.00	0.00	125%	0.00	0.00	0.00
	ALL OTHERS	0.00	0.00	0.00	100%	0.00	0.00	0.00
DEDICATED RECEPT		2.20	1.25	1.30	100%	2.20	1.25	1.30
TOTAL KVA PER PHASE		3.20	2.25	1.30		3.45	2.50	1.30
TOTAL DEMAND AMPERES PER PHASE						29	21	11
PANEL / FEEDER (TOTAL KVA)								7.25
(TOTAL KVA) X 1000 / VOLTS X 1.732 = TOTAL AMPS								20

PANEL 'INVL1'

PANEL 'INVH1'

LOAD SERVED	KVA/Phase A	B	C	CKT BRKR	CKT NO	NEUTRAL A B C	CKT NO	CKT BRKR	KVA/Phase A	B	C	LOAD SERVED
ELEV. MACH. RM EMERGENCY LTG	0.13	---	---	1P-20	1		2	1P-20	0.80	---	---	LEVEL 1 GARAGE EMERGENCY LTG
STAIR 1 LIGHTING	---	0.44	---	1P-20	3		4	1P-20	---	0.82	---	LEVEL 2 GARAGE EMERGENCY LTG
STAIR 2 LIGHTING	---	---	0.37	1P-20	5		6	1P-20	---	---	0.68	LEVEL 3 GARAGE EMERGENCY LTG
SPARE	0.00	---	---	1P-20	7		8	1P-20	1.62	---	---	LEVEL 4 GARAGE EMERGENCY LTG
ELEC, IT, SECURITY & STOR LTG	---	0.64	---	1P-20	9		10	1P-20	---	0.00	---	SPARE
SPARE	---	---	0.00	1P-20	11		12	1P-20	---	---	0.00	SPARE
SPARE	0.00	---	---	1P-20	13		14	1P-20	0.00	---	---	SPARE
SPARE	---	0.00	---	1P-20	15		16	1P-20	---	0.00	---	SPARE
SPARE	---	---	0.00	1P-20	17		18	1P-20	---	---	0.00	SPARE
SPARE	0.00	---	---	1P-20	19		20	1P-20	0.00	---	---	SPARE
SPARE	---	0.00	---	1P-20	21		22	1P-20	---	0.00	---	SPARE
SPARE	---	---	0.00	1P-20	23		24	1P-20	---	---	0.00	SPARE
SPARE	0.00	---	---	1P-20	25		26	3P-30	3.20	---	---	PANEL 'INVL1' THRU XFMR 'INVT1'
SPARE	---	0.00	---	1P-20	27		28		---	2.25	---	
SPARE	---	---	0.00	1P-20	29		30		---	---	1.30	
SUB TOTAL	0.13	1.08	0.37						5.62	3.07	1.98	SUB TOTAL
									5.75	4.15	2.35	TOTAL

C/B TEMP. 75 C. RATING 277 480 V 3 PH 4 WIRE
MOUNTING SURFACE
ISOLATED GROUND BUS ( ) YES (X) NO
MAIN CIRCUIT BREAKER (X) YES ( ) NO
SERVICE ENTR. RATED ( ) YES (X) NO
MINIMUM AIC (K AMPS) 18
MCB RATING 30A
BUS RATING 125A
NEUTRAL RATING 100%

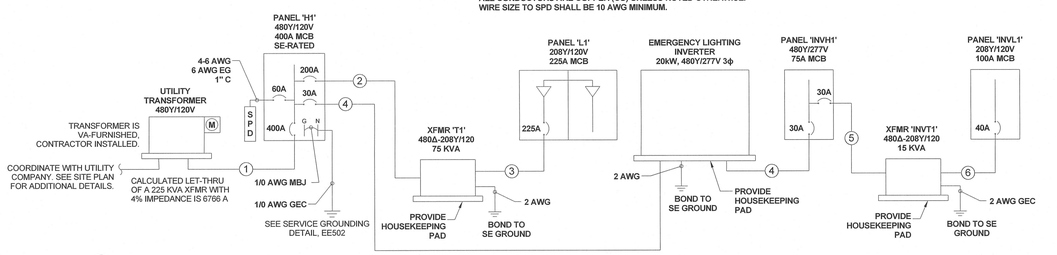
LOAD TYPE	CONNECTED KVA A	B	C	NEC DEM FACTOR	DEMAND KVA A	B	C
GENERAL LIGHTING	3.55	2.90	1.05	125%	4.44	3.63	1.31
DEDICATED RECEPT	2.20	1.25	1.30	100%	2.75	1.56	1.63
TOTAL KVA PER PHASE	5.75	4.15	2.35		7.19	5.19	2.94
TOTAL DEMAND AMPERES PER PHASE					26	19	11
PANEL / FEEDER (TOTAL KVA)							15.31
(TOTAL KVA) X 1000 / VOLTS X 1.732 = TOTAL AMPS							18

PANEL 'INVH1'

ELECTRICAL EQUIPMENT FEEDER SCHEDULE

1	400A	2 PARALLEL RUNS EACH WITH 4-300 KCMIL IN 3" C
2	200A	3-3/0 AWG, 6 AWG EG IN 2" C
3	225A	4-4/0 AWG, 4 AWG EG IN 2 1/2" C
4	30A	4-10 AWG, 10 AWG EG IN 3/4" C
5	30A	3-10 AWG, 10 AWG EG, 3/4" C
6	40A	3-8 AWG, 10 AWG EG, 3/4" C

ALL CONDUCTORS ARE COPPER (CU) UNLESS NOTED OTHERWISE.
WIRE SIZE TO SPD SHALL BE 10 AWG MINIMUM.



1 EE601 ELECTRICAL SINGLE-LINE DIAGRAM
NTS

SOUTH CAROLINA Apogee Consulting Group, P.A. C02379 CERTIFICATE OF AUTHORIZATION

Revisions:	Date

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CONSTRUCTION DOCUMENTS

Drawing Title: ELECTRICAL SINGLE-LINE AND PANEL SCHEDULES	Project Title: CONSTRUCT PARKING GARAGE	A/E Project Number: 15.1003	OFFICE OF FACILITIES MANAGEMENT
		Building Number: BLDG 108	
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